TRANSITION, RECESSION AND LABOUR SUPPLY IN KAZAKHSTAN (1990-1996)

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January 2000

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ABSTRACT

This thesis explores how transitional reforms and the concomitant recession have transformed the labour market in Kazakhstan and how changes in the labour market have transformed workers' attitudes to labour supply. It is found that the initially expected reallocation of labour from the state to the private sector has been a very weak phenomenon and that, instead, a sharp growth of self-employment has occurred. During a period of transition and recession, such as the one that Kazakhstan is experiencing, income seems to converge towards a subsistence minimum across working sectors altering the relationship between growth, wages and productivity. In such an environment, the supply of labour is mainly determined by non-income factors and so is the cross-sector mobility. Unemployment exists not as a temporary phenomenon instrumental in labour reallocation but as a permanent condition for the very poor. Current labour market policies, originally designed for structurally different labour markets, seem inconsistent with the nature of unemployment and unsustainable in the long run. The prolonged stagnation is dragging the economy towards a third world scenario rather than a first. Hence, future prospects and policies are to be re-thought not in terms of transition but in terms of economic development.

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
BS	Baltic States
BOF	Bank of Finland
CEE	Central and Eastern Europe
CIS	Commonwealth of Independent States
CPORK	Centre for Public Opinion Research of Kazakhstan
CSAK	Committee for Statistical Analysis of the Republic of Kazakhstan
EBRD	European Bank for Reconstruction and Development
EIU	Economist Intelligence Unit
ES	Employment Services
EU	European Union
FSU	Former Soviet Union
IBRD	International Bank for Reconstruction and Development
ILO	International Labour Organisation
IMF	International Monetary Fund
NBK	National Bank of Kazakhstan
NBR	National Bank of Russia
RC	Republic of China
RK	Republic of Kazakhstan
RU	Republic of Ukraine
SCUS	State Committee of the USSR on Statistics
UN	United Nations
UNDP	United Nations Development Programme

FORWARD

The idea to write a thesis on the labour market in Kazakhstan came to me during a joint UNESCO and ADB mission in Kazakhstan in which I accidentally participated in November and December 1995. The mission had the principal task of reviewing the educational sector in Kazakhstan and included a labour market study. From this study, it appeared that the registered unemployed were around 2.5% of the labour force. This seemed incompatible with the output shock that the country had experienced and was still experiencing at the time. Labour force surveys were not yet available and the general understanding of the labour market was that state enterprises had retained most of the workers for various reasons and that most of those who exited these enterprises turned to informal activities.

During the mission and the following year, I lived on a street called 'Seifulina' in the now ex-capital city Almaty. The street was known for being the recruiting place of occasional labour, the place where the real unemployed stand on street corners waiting for the occasional employer. I remember leaving my flat in winter mornings (with temperatures varying from –15 degrees Celsius to –35) and seeing these men with their tool-kits waiting for a potential employer. I would find them again in the evenings, standing on the same corner chatting to their neighbours. These were real job seekers that for some reason did not register at employment offices.

With positive growth forecasts for 1996, the general understanding was that the worst was over and that the country was about to move slowly out of the recession. However, while the facade of the capital city continued to change, enterprises continued to experience major difficulties and, to this day, output remains as it was at the bottom of the recession in 1995. In the course of the writing of the thesis it became obvious that the country faced structural limits to change and that the transition to recovery was not going to happen simply pushing through the existing reforms. What I have tried to do in this work is to look at changes from the perspective of the workers. I have tried to understand the

mechanics of the recession, the impact on the labour market and how labour responded to such shocks. I found this perspective useful to shed some light on apparent inconsistencies of changes in macro variables such as output, employment and unemployment.

During the research, I had multiple objectives in mind. The period considered is historically important, the country considered is one of the least studied, the topic covered is one that attracted little attention in mineral rich Kazakhstan and facts and figures generally available to the large public are very scarce. Therefore, I felt that a record of events, facts and figures was a first necessary contribution of this work. Second, I felt that the study of labour markets in transition had overlooked the major single phenomenon occurred in the CIS, i.e. the growth of self-employment. By bringing to the fore self-employment I took a fresh look at the reallocation of labour and labour supply. Third, I felt that the role of the private sector in driving the recovery had been overestimated. I tried to assess the real size and potential of the private sector by looking at the workers in the sector. Fourth, I felt that the approach to labour market policies has been inconsistent with the nature of unemployment in Kazakhstan. Therefore I tried to highlight such inconsistencies and discuss how to move beyond them. Last, I felt that the process of transition I had been witnessing was a convergence towards an economy of a developing type with a large section of the population engaged in informal and subsistence activities. In this sense, the 'transition debate' will, in my view, leave the ground to a 'development debate' and we need therefore to re-equip ourselves with a different set of tools.

The thesis is structured in six chapters. The first chapter is a general introduction of the process of transition in the CEE and CIS countries, Chapter 2 sets up the framework of the analysis. Chapter 3 looks at reforms and the causes of the recession. Chapter 4 discusses direction and mechanics of the reallocation of labour and Chapter 5 tests some of the hypotheses developed in chapter 4. Chapter 6 discusses labour market policies in the light of the findings and speculates on the future of labour.

I wish to thank a few people who facilitated this work. My parents provided the necessary preconditions. My flatmate, Paul Norman, offered last minute help with the thesis and proved to be a great company over these years. My supervisors Richard Jackman and Robin Burgess made sure I completed the work in a reasonable time. The staff of the Committee for Statistical Analysis of the Republic of Kazakhstan (CSAK) and the staff of the Ministry of Labour and Social Protection (MLSP) have provided most of the data used in this study with great courtesy and sense of hospitality. The World Bank provided the 1996 Kazakhstan Living Standards Measurement Survey (KLSMS) data set. The years of study have been financed with work I did in and on Kazakhstan with UNESCO, USAID, Bocconi university, IMC consulting, UNU-WIDER and the World Bank. Thanks to these organisations I have been able to combine work and research in a mutually enriching experience. I wish to dedicate this work to the memory of my grandparents, Angelo, Gina and Wanda and to my living grandfather Piero.

Paolo Verme
London, 20 December 1999

PART I – CEE AND CIS

CHAPTER 1

TRANSITION, OUTPUT AND LABOUR IN CEE AND CIS ECONOMIES

This preliminary chapter is a brief introduction to some general aspects of the process of transition from a planned to a market economy occurring in Central and Eastern European countries (CEE), and the republics of the Former Soviet Union (FSU). I recall how the process started, what it entails, how it is measured, its general performance to date and the main debates emerging from the specific literature. The parallel experiences of CEE and CIS[1] countries and labour market developments are the central arguments treated in this chapter. The purpose is to situate the work that follows in the wider context of transition.

1. Introduction

When Gorbachev initiated economic reforms towards a market economy in the Soviet Union, the leader was supported by the West as a courageous reformer and someone who the Western hemisphere could finally look at as an interlocutor for a large range of international issues. This new atmosphere of relaxation of traditional cold war tensions coupled with dynamic political changes in countries such as Poland prepared the ground for more audacious changes throughout the Socialist East culminating in the fall of the Berlin wall and the assimilation of East Germany into West Germany.

While until the fall of the Berlin wall changes were driven largely by long periods of negotiations and consideration of the political and economic implications of such changes, the images diffused around the globe of German reunification raised in the minds of millions unprecedented expectations for a better future of prosperity. Political leaders across the East did not fail to catch this new

[1] Commonwealth of Independent States. This includes all FSU republics except the Baltic States (BS – Latvia, Lithuania and Estonia)

atmosphere and used it to support personal and regional interests buried for so long under the Soviet Union's political influence. Countries of Central and Eastern Europe (CEE), which had embarked on the reform process somewhat earlier than the Soviet Union, found it relatively easy to disconnect themselves from the political influence of the Soviet Empire already afflicted by internal instability. And by 1991, the same Soviet Union disintegrated into fifteen different and sovereign republics, the Newly Independent States (NIS). Twelve of these republics, all excluding the Baltic States (BS), founded the Commonwealth of Independent States (CIS).

The disintegration of the Soviet Union in 1991 was principally the fruit of an internal struggle. As Gorbachev was the head of the Soviet Union, the decision to break-up the union taken by Eltsin and sealed in Minsk in December 1991 rendered Gorbachev powerless. The same decision paved the way for other republics to declare independence from the Union. For peripheral leaders, it became a matter of exploiting the weaknesses of the centre, the boiling expectations of the people and the drive to regain those national identities suppressed under Stalinism. This move was also welcomed by those young reformists within Russia who believed that market reforms in Russia could have been speeded up if the country could count on all its resources. As Russia was a net provider for the other Republics, the break-up would have liberated resources for Russian reforms. The economic and also long-term political implications of these changes were hardly considered during 1991 as these considerations were overruled by the logic of mass psychology, short-term political interests and internal power struggles.

Once political independence had been achieved and once the internal power struggles reached a consensus for a political leadership, economic issues exploded in the hands of the new political elites. The NIS had to build a new system of production, the new states had to be instituted, firms privatised, inter-industrial relations re-organised, the financial system re-invented, market forces introduced and laws and regulations able to control all the above changes designed. This was

an unprecedented change in history with no model to look at and no blueprint. The initial situation was known and the final target visualised in the form of a OECD-type of economy, but the know-how was missing.

These events occurred in a period when OECD countries were struggling with a minor but persistent economic crisis coupled with severe budget constraints and when the monetarist counter-revolution and neo-liberalism were dominating the economic and political agendas in many Western economies, partly as a result of the 'Thatcherism' and 'Reaganomics' ideological foundations. The state and its influence on economic activities were increasingly perceived in academic and political circles as a potential obstacle to growth. The early nineties saw an unprecedented swing towards monetarist beliefs. The focus was on stabilisation policies, principally addressed at controlling inflation and containing budget deficits, and on privatisation and liberalisation strategies, regarded as the ideal tools for increasing efficiency and reducing budget deficits. Even in Europe, where radical monetarist tendencies were still confronted by historical traditions of welfare policies, the Maastricht criteria and privatisation trends developed very much in line with the neo-liberal logic.

In a period of great changes for the post-communist economies, when the loss of ideology left a vacuum to be filled, the predominant OECD ideological trend became quickly the dominant ideology. Both for those who were in search of a new ideological identity and for those who were keen at testing a radical approach in a historically unique laboratory, liberalisation, privatisation and monetary austerity seemed the recipe for stability and prosperity. By then, the search of a 'third way' as a possible alternative to both Capitalism and Socialism had been abandoned.

There is a general consensus around the fact that socialist economies had to be reformed. A close analysis of the last thirty years of the Soviet Union shows negative trends that would have eventually driven the system to a halt. Easterly and Fischer (1994) carried out an extensive comparative study of Soviet growth

between 1928 and 1987. They find that growth rates, independently from the data source considered, have been declining persistently at least starting from 1950. The last period considered, 1980-1987 shows growth rates estimates between 0.2 and 3.4% per year. World growth decelerated during the 1970s and 1980s and crude data show that the Soviet Union performed slightly better than world average. However, when controlling for factors' input, the same authors conclude that '*(...) the Soviet economic performance conditional on investment and human capital accumulation was the worst in the world over 1960-1989'* (p. 6).

The dispute around the alternative views of embracing western capitalism or searching for a 'third way' lost much of its vigour when in the early nineties, by popular demand, socialist economies rushed to the market. Ten years into the transition process a substantial dispute around the 'how' the transition should be or should have been conducted remains as the social cost determined by the process soared to dramatic proportions.

2. Some definitions

The main concern of the Socialist political apparatus was how to implement reforms avoiding the painful step of rejecting Socialism and the leadership of the central party. This dilemma remained unresolved in the Soviet Union, and when drastic reforms were first introduced by Gorbachev they in fact led to political instability and eventually to the collapse of the mono-party system. Between the two extremes of a full-fledged democracy and a mono-party state, transition is taking place across a wide range of political frameworks. Despite the fact that most of the political structures across the post-socialist East perform under the name of democracies, political consensus is often not achieved by means of democratic norms. Several countries of the Former Soviet Union moved from a mono-party system to a one-man state regardless of the democratic institutions established. Political consensus is often achieved through non-democratic norms. Other countries such as China and Vietnam have been successful in managing market reforms with a mono-party state. The political and economic faces of

transition may not, in fact, be as correlated as the association between these two variables in OECD countries would suggest. A full-fledged democracy seems to be neither a precondition nor a consequence of economic transition, at least in the short-run.

With economic transition taking place under a wide range of political frameworks, it remains problematic to define the term transition in political terms. On the contrary, the economic profile of transition seems to reproduce itself with a similar pattern in all those former socialist countries that initiated structural changes after 1989. A number of standard reforms, such as price and trade liberalisation, privatisation of assets, establishment of independent financial institutions and stabilisation measures, are the most evident transformational characteristics that these economies share. Thus, the term 'transition' itself may be defined as a standard package of economic reforms necessary to move from a socialist to a capitalist and market based system of production. And transitional economies may be defined as those economies which, in one form or another, are adopting this package.[2] The standard package of economic reforms which defines the term 'transition' can be condensed into the areas of intervention outlined below.

Price liberalisation: The government decides to let prices on goods and services float. Economic agents suddenly find themselves in a position to establish prices. It can be implemented in a gradual manner, by liberalising prices in successive stages and by imposing 'ceilings' to price increases progressively lifted, or by liberalising prices of different commodities in a sequential manner. Or, alternatively, it can be done all at once across the board. Price liberalisation is not a cause in itself of inflation but it can release over-hanging inflation especially in situations of severe shortages.

[2] Here we are not suggesting that political changes are not important factors for transition. On the contrary we will see that political reforms are at the origin of systemic changes in Kazakhstan. What we argue is that it is difficult to define transition as a common pattern of political reforms followed by all socialist reformers. Also, the definition offered suits CEE and NIS economies better than those economies that initiated reforms earlier such as China or Vietnam.

Trade and exchange rates liberalisation: It is the removal of quantitative and/or qualitative restrictions on imports and exports and the free floating of the currency on the international market. Again it can be applied in a gradual or instant manner. Its pros and cons are widely debated in the trade literature.

Establishment of property rights: This is a legal process that establishes the right to engage freely in economic activity by defining entitlements. It is a precondition for privatisation and creates a fundamental set of rules necessary to regulate market exchanges.

Privatisation: It is the process of transferring property rights from the State to the private sector. There was no blueprint on how to do it starting from a nearly exclusive state economy. A number of similar procedures have been implemented which usually include the allocation of shares to the entire population, the re-collection of these shares by investment funds and the sale of state properties to individuals and investment funds in the course of auctions.

Establishment of market financial institutions: In command economies financial institutions had the prevalent role of transferring funds between operators for accounting purposes. In market economies they have to guarantee a correct allocation of resources according to financial criteria. These types of institutions had to be created in order to channel the savings generated by the new private and public sectors into proper investments.

Macroeconomic stabilisation : This is a necessary consequence of the shocks generated by the measures above. Price and trade liberalisation often spark uncontrolled inflation, privatisation generates winners and losers, the financial institutions established in the early stage of transition turned out to be very weak and unreliable reducing savers' confidence and investors' abilities. Monetary restrictions and inflation control, budget cuts and reallocations, the establishment of a sound fiscal system and restrictive monetary and fiscal policies define 'stabilisation' and characterised the immediate post-liberalisation environment.

Other legal reforms : This refers to the introduction of all those laws, rules and regulation which regulate the relations between operators in a market economy. These should guarantee a sufficiently risk-free environment to establish confidence in the system, encourage transactions and investments.

Having defined the term transition in economic terms, we should be able to measure the state of the process. How far transitional economies moved away from a command system and how close are they coming to an OECD-like market system. Indeed, there is no one market system, and even considering the share of the private sector in the economy among different OECD countries it is difficult to say what is the standard model of a market economy. How do we measure transition ?

The European Bank for Reconstruction and Development (EBRD) dealt extensively with this issue elaborating a measure of transition based on several criteria such as the private sector share, degree of privatisation and enterprise restructuring, prices and trade liberalisation, competition policies and financial sector reforms.[3] De Melo *et al.* (1996) constructed a liberalisation index that takes into account reforms in three major areas, internal and external markets and property rights. They calculated the index for 26 countries and classified them in four categories according to the index achieved. As the EBRD classification is reproduced on a regular basis, I will adopt its criteria as a measure of transition whenever it will be necessary to compare economies in relation to their specific advancement with reforms.

The 26 economies considered by the EBRD (CEE, BS and CIS) are those we will refer to in this study. The focus is on the Commonwealth of Independent States (CIS) and Kazakhstan will be the case study analysed in Part II.

[3] See EBRD (1995)

3. The state of transition

Transitional economies have experienced in the 1990s a sharp decline in output. Table 1.1 reports GDP figures between 1989 and 1997 (1989 = 100) for 24 CEE and NIS economies. All economies experienced a rapid decline until 1992. After 1992, the CEE economies managed to stop and reverse the negative trend while output decline in the CIS continued well into 1996.

Table 1.1 – GDP in CEE, BS and CIS (1989-1997)

	1989	1990	1991	1992	1993	1994	1995	1996	1997*
CEE, BS, CIS	**100**	**95.1**	**87.8**	**78.7**	**74.5**	**69.6**	**69.0**	**68.3**	**69.4**
CEE and BS	**100**	**93.2**	**83.3**	**79.8**	**80.1**	**83.1**	**87.5**	**91.1**	**93.9**
Albania	100	90.0	65.1	60.4	66.2	72.4	78.8	85.3	72.5
Bulgaria	100	90.9	80.3	74.4	72.6	73.9	75.5	67.3	62.5
Croatia	100	93.1	74.7	66.4	65.8	66.2	67.3	70.1	73.6
Czech Republic	100	98.8	87.4	84.6	85.1	87.4	92.5	96.3	97.3
Estonia	100	91.9	84.6	72.6	66.4	65.3	68.1	70.8	75.7
Hungary	100	96.5	85.0	82.4	81.9	84.3	85.5	86.4	89.0
Latvia	100	102.9	92.2	60.0	51.1	51.4	51.0	52.4	54.2
Lithuania	100	95.0	82.3	51.3	38.9	39.2	40.4	41.9	43.8
Poland	100	88.4	82.2	84.3	87.6	92.1	98.6	104.5	110.2
Romania	100	94.4	82.2	75.1	76.2	79.2	84.8	88.3	86.9
Slovak Republik	100	97.5	83.3	77.9	75.0	78.6	84.0	89.8	93.8
Slovenia	100	95.3	86.8	82.0	84.3	88.8	92.5	95.3	99.1
CIS	**100**	**96.3**	**90.7**	**77.7**	**70.5**	**61.0**	**58.0**	**55.3**	**55.8**
Armenia	100	92.6	76.8	36.4	31.0	32.7	34.9	37.0	39.1
Azerbaijan	100	88.3	87.7	67.9	52.2	42.7	38.0	38.5	40.5
Belarus	100	97.0	95.8	86.6	80.1	70.0	62.7	64.3	66.2
Georgia	100	87.6	75.5	41.7	31.1	27.6	28.2	31.2	34.4
Kazakhstan	100	99.6	86.7	84.1	75.4	62.0	56.5	57.1	58.2
Kyrgiz Republic	100	103.0	97.9	79.3	66.6	53.3	54.0	57.0	60.4
Moldova	100	97.6	80.5	57.2	56.6	38.9	37.8	34.7	34.1
Russia	100	96.0	91.2	78.0	71.2	62.2	59.7	56.7	57.3
Tajikistan	100	98.4	91.4	64.9	57.7	45.3	39.6	36.9	35.8
Turkmenistan	100	102.0	97.2	92.1	82.8	67.1	61.6	59.8	50.8
Ukraine	100	96.6	85.4	73.7	63.2	48.7	42.9	38.6	37.4
Uzbekistan	100	101.6	101.1	89.9	87.8	84.1	83.4	84.7	85.5

Source: EBRD (1997), IBRD (1997b), IMF (1997), CIS-Stat (1998), calculated from GDP annual percentage changes. (*) 1997 data are still subject to revisions.

The size of the output decline has been object of dispute in the transitional literature. It is argued by some that the output fall has been largely overestimated for a number of factors which go from statistical errors (Berg and Sachs, 1991, 1992) to measurement discrepancies between old and new systems of

classification (Jackman 1995). Kaufmann and Kaliberda (1996) have argued that GDP declined less than what estimated in national accounts. This would be shown by data on energy consumption, which declined significantly less than GDP estimates. Thus, there has been a general disbelief about such unprecedented recession.

Partly as a consequence of this lack of trust in administrative data and partly as a need to investigate an unprecedented convergence of factors, a long series of articles around the causes of the output decline in transitional economies have been published (Aghevli *et Al.* 1992, Commander and Coricelli 1992, Borensztein and Ostry 1992, Rosati 1994, Gomulka 1996b). Causes of the output decline discussed in the literature traced structural and institutional factors, supply and demand shocks, stabilisation measures, reforms and disorganisation. In substance, the debate is around the 'weight' to be attributed to each individual factor in explaining the output decline and the mechanism that links each factor to output. The reliability of data and the causes of the output decline in Kazakhstan will be discussed in Chapter 3.

Macroeconomic indicators on the whole showed unprecedented negative swings. Inflation skyrocketed in the first few years of transition. According to the EBRD (1996), the average rate for the 25 countries considered (annual percentage change) was 160% in 1991, 1047% in 1992, 2291% in 1993, 675% in 1994 and 152% in 1995. Unemployment, which in 1989 was still close to zero, reached by 1996 values ranging from 3% to 15% of the labour force. In the aftermath of the Comecon disintegration, trade collapsed and internal and external debts have been growing since. The rates of savings and investments declined together with the contraction of internal demand.

The social consequences of this great depression are reflected in a major population crisis, increase in poverty and income inequality. The population crisis has been characterised by falling birth rates, soaring death rates and large migration flows. Life expectancy at birth decreased in most countries. The share

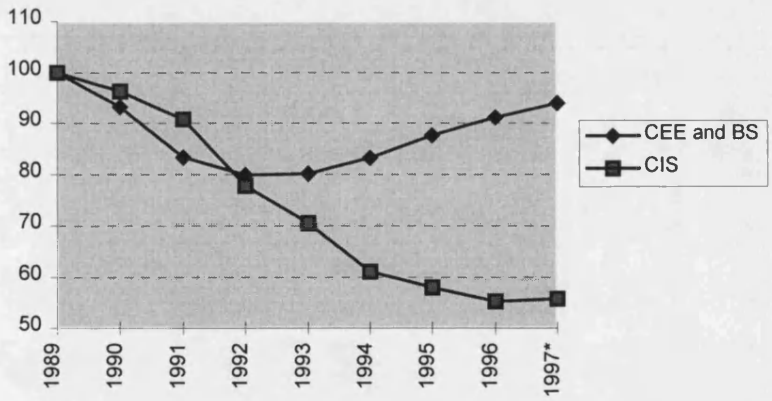
of the population living below the poverty line increased and income inequality as measured by the Gini coefficient increased in most countries. Health and education provision and standards declined sharply. Considering the UNDP Human Development Index (HDI), between 1990 and 1995, all CEE and NIS countries lost positions in the overall ranking with the sole exception of Romania. Poland, which lost less than any other transitional economy, lost four positions while Georgia, which lost the most, fell by fifty-nine positions in the scale. The average HDI value fell from 0.854 to 0.804 (-6%) for CEE countries and from 0.779 to 0.665 (-15%) for CIS countries (UNDP 1992 and 1998). Considering that in 1995 the average value for industrialised countries was 0.911 and that for developing countries was 0.586, transitional economies and CIS countries in particular have been converging towards developing nations standards. An apparent transition from second to third world standards rather than from second to first world.

Yet, to the traveller's eye the post-socialist scenario offered by Eastern capitals is made of dynamic changes, emerging opportunities and the liberation of an energy potential manifested in free press, the development of alternative forms of art, music and culture in its wider sense. In Moscow, Almaty, Tallin, Warsaw or Budapest today one can find a large diversity of shops and products which would have not been imaginable just few years ago. Wealth and its different expressions parade in eastern capitals as it is rare to see anywhere else on the planet. For those who visited the same capitals ten or fifteen years ago changes occurred are remarkable. On the other hand, moving out of the capitals and into the provinces and rural areas scenes of extreme poverty are recurrent and the contrast is striking. Because of such contrasts, observers tend to polarise around extremes, being either too optimistic or too pessimistic about the future of these countries. For one thing, the transition process is far from being an homogenous process and features change widely when we start to discriminate between countries and regions.

4. Two patterns of transition

One visible aspect of the process of transition is how CEE and CIS countries differed in their performances. GDP fall has been less deep and less protracted in CEE countries than in the CIS and most of European transitional economies are now back on a growth path. The shape of the trend shown by CEE countries has been described as a *U-shape* form of transition (Blanchard 1997). On the other hand, CIS economies have experienced a deeper recession and found more difficult to re-establish growth. Only in 1997, the average growth rate for CIS economies became positive. Thus the form of transition manifested by CIS countries to date would be better described as an *L-shaped* form, where the deep and protracted recession is being followed by stagnation or very slow growth. This is shown in Chart 1.1 where the U and L shapes are quite evident.

Chart 1.1 - GDP in CEE, BS and CIS (1989=100)



Source : Table 1.1; (*) Provisional estimates

Generally speaking, CIS economies have been slow reformers if compared to CEE neighbours. The EBRD evaluates the progress of reforms by giving a score from one to four to each category of reform and each country. One for the slow reformers, four for the fast ones. From this ranking a score can be calculated averaging CEE and CIS countries (Table 1.2). This shows that, as a whole, CIS economies have lagged behind the CEEs on this front.

Table 1.2 - Reforms Index (1990-1996)

	1	2	3	4	5	6	7	8	9
CEE and BS	3.27	3.98	2.67	3.02	4.08	2.48	2.94	2.52	3.12
CIS	2.54	3.04	1.81	2.88	2.92	1.77	1.88	1.67	2.31

Source : Calculated from EBRD (1997)
Legenda: 1. Large-scale privat. ; 2. Small-scale privat ; 3. Governance and restructuring ; 4.Price liberalisat. ; 5. Trade and Foreign exchange system ; 6 Competition policy ; 7. Banking reform and interest rate liberalisation ; 8. Securities markets and financial institutions ; 9 Average

These particular trends have induced some scholars to argue that a negative relationship between the pace of reforms and output exists. Where reforms have been implemented faster the output decline has been smaller. As a consequence of this line of thought, CIS countries would recover faster if only reforms would be speeded up.

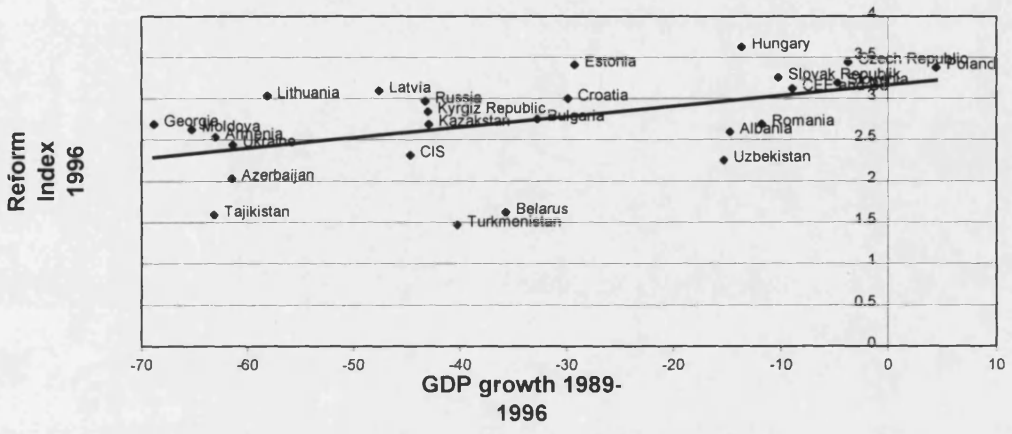
The speed of reforms has been a very controversial issue particularly in the early stage of reforms. Many argued that a 'big-bang' or 'shock-therapy' approach to reforms minimises the costs in social and economic terms (Blanchard 1991, Aghion and Blanchard 1993, Borensztein and Ostry 1994). With fast liberalisation, markets are soon normalised and can behave according to price signals. These induce operators to behave rationally, maximising resource allocation and stimulating accumulation and eventually growth. The case of Poland, usually taken as an example of successful shock therapy, is pointed at by the supporters of this idea. On the other front, supporters of the gradualist path argue that the speed of reforms is the cause of great sufferings which could have been mitigated if the reforms were taken at successive steps in a co-ordinated fashion (Nuti 1992b). This approach would leave space for experimenting reforms either by initially confining them to certain areas or by introducing them gradually. Supporters of this standpoint usually point at China indicating this country as a successful gradualist reformer.

Among others, the World Bank in its 1996 World Development Report suggested that the pace and advancement of transitional reforms is positively correlated with growth. This would be shown by a Chart presented on page 30 of the report where a liberalisation index is plotted against cumulative output decline. At a closer

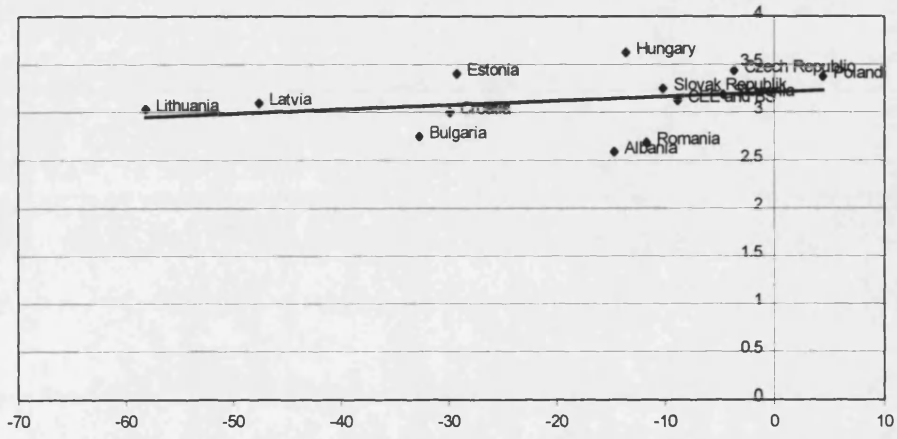
look, if we split the chart into two halves, on the left hand-side (the negative slope) we find exclusively CIS economies while on the right-hand side (the positive slope) we find the other transitional economies. The report fails to notice this aspect. Taking data from table 1.1 in this chapter and the EBRD reform index of table 1.2, we find a similar dichotomy. While the positive relationship between growth and liberalisation seems to hold when we look at the 24 transitional economies as a whole (Chart 1.2.A), at a closer look, the correlation is much weakened when we discriminate between CEE/BS and CIS countries. CEE countries with the highest reform indexes such as Poland and the Czech republic suffered a less acute recession as opposed to slower reformers such as Bulgaria (Chart 1.2.B). But for the CIS countries, the same relationship does not hold. If anything, the relationship between reforms and growth is negative (Chart 1.2.C).

Chart 1.2 - GDP and Reforms

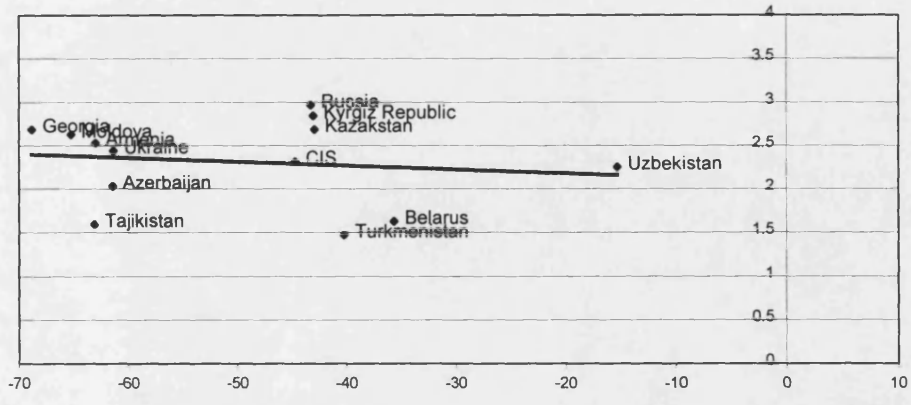
(A) CEE, BS and CIS



(B) CEE and BS



(C) CIS

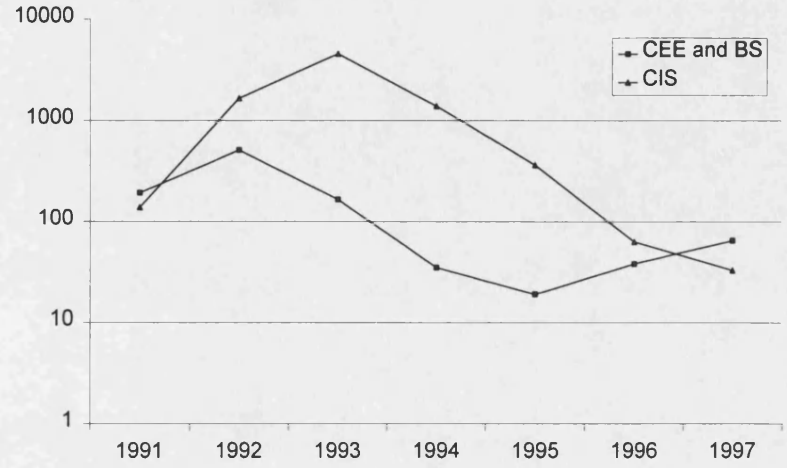


Source : Table 1.1 and EBRD (1997)

Others have argued instead that CIS countries are simply late comers and if performances are adjusted to the time of the introduction of reforms, CEE and CIS countries would show a very similar pattern indeed. Fischer, Sahay and Vegh (1998) argued that when performances of different transitional countries have been adjusted for the initial year of stabilisation reforms, the CEE and CIS patterns do not differ a great deal. In their own charts and words the authors recognise that CIS countries show a deeper recession than the CEEs but conclude that CIS economies are simply in an earlier stage of reforms. The authors use data until 1995 and up until that time a similar conclusion would have been plausible. However, repeating the exercise including 1996 and 1997 figures it shows that output in CIS economies stagnated over the period while reforms advanced. Today most scholars would agree that CIS economies seem to have entered into a stagnant period.

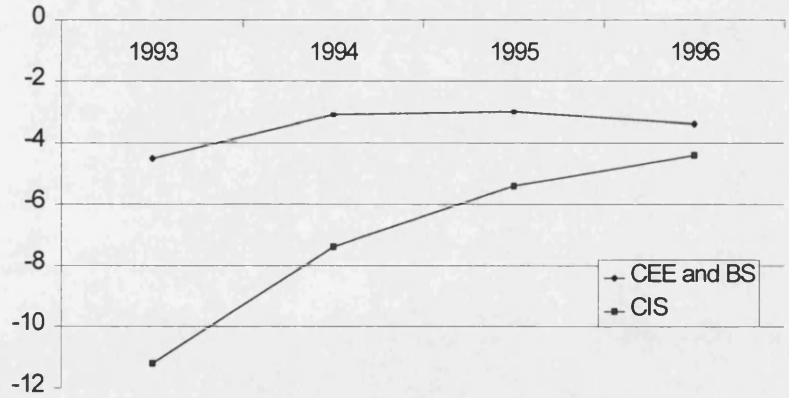
There is an additional element that casts doubts on the allegedly positive relationship between output and liberalisation in the CIS countries. If the success of stabilisation reforms can be measured by the capacity to succeed in curbing inflation and bringing general government balances to sustainable levels (two indicators not included in the EBRD reform index), then CIS countries as a whole outperformed CEE countries, considering the deeper recession they have been subject to. This is shown by Charts 1.3 and 1.4. Despite the highest inflation experienced by CIS countries in the early years, these economies managed, on average, to curb inflation below CEE average (EBRD 1997). Even when looking at general government balances (as % of GDP), CIS countries have been able to close the gap with CEE economies by 1996 despite the worse situation they came from.

Chart 1.3 - Inflation (annual changes)



Source : EBRD (1997)

Chart 1.4 - General Government Balances (% of GDP)



Source : EBRD (1997)

It is widely accepted that monetary restrictions, particularly those addressed at limiting the monetary base, have been the key factor for the successful drastic reduction of inflation occurred in all transitional economies. However, expectations for growth have been quite disappointed by the poor performance, and a number of schools are now pointing the finger against the excessive restrictive spiral that these policies entail. With low internal saving rates, limited foreign direct investments, growing external debt and budget restrictions there is little space for manoeuvre that could generate productive investments. It is argued that a somewhat looser monetary policy could be tolerated if it provides the space for higher productive public spending, higher wages and generation of internal savings.[4]

Equally under dispute is the choice of the mechanism to adopt for a successful stabilisation. The IMF approach usually described as Orthodox Monetary Based Stabilisation (OMBS), where the size of the money stock is the main target and monetary and fiscal policies drive stabilisation, is challenged by the Heterodox Exchange Rate Based Stabilisation (HERBS) where the exchange rate is used as nominal anchor and income policies are addressed at containing inflation together with monetary policies.[5]

Related to the speed of reforms, the debate on the timing and sequencing of reforms has occasionally emerged particularly among policy makers and in relation to certain countries. If reforms cannot be introduced all at once across the board what should be done first and what later? Should the initial macroeconomic environment be considered and reforms adapted or should reforms such as price liberalisation be introduced at once regardless of the initial conditions?

[4] European schools are usually at the forefront of this stand. The Vienna Institute of Comparative Studies published several papers and books in support of a more Keynesian approach. The UN Economic Commission for Europe sustains less restrictive approaches to monetary policies and European Union projects working on economic trends throughout the Former Soviet Union also claim the necessity to loose inflation targets.

[5] See Bofinger (1996) for a comprehensive discussion on OMBS and HERBS

It is useful to distinguish between timing and sequencing of reforms. We could interpret *timing* as having three connotations. One is the timing which refers to the relation between the moment a reform is launched and the macroeconomic environment present at that particular moment. The second connotation is the length of time necessary for a reform to have its effect and the third is the time period affected by the reform. A reform can have positive or negative effects according to when it is introduced. The *sequencing* refers to the relation between different reforms. Therefore it is the order of reforms which is stressed when analysing sequencing. Discussions around these two aspects do not have a clear cut two visions approach as it was the case before. Opinions are much more spread and reach the state of dispute when reference is made to a specific country and time.[6] This is a critical area that will be explored in chapter 3.

Thus, CIS economies seem to have been fairly successful in stabilisation policies (Charts 1.3 and 1.4) and price liberalisation (Table 1.2) on the whole, remaining slow on other aspects of reforms. The CIS recession has been deeper and more protracted than the one experienced in the CEE countries and the positive relationship between growth and reforms does not seem to hold. Today CIS countries seem to find more difficult to re-establish growth irrespective of the state of transitional reforms, leaving unresolved some of the important debates that have emerged around the transition experience.

5. Two patterns of labour dynamics

The transitional 'dualism' evident in macroeconomic trends persists when we shift the attention to labour market developments. The process output-employment-unemployment took very different shapes depending whether we are looking at CEE or CIS countries. Some important differences are outlined below.

CIS countries experienced a 'gap' between the reduction in output and the reduction in employment which is not visible in CEE economies. Table 1.3.

[6] The literature on Poland and the Czech Republic after 1989 is particularly rich on the timing and

shows that this gap is on average more than (-) 36 percentage points as opposed to an average for CEE countries which is slightly positive. The CIS trend can be explained in terms of labour hoarding and underemployment facilitated by soft-budget constraints, sharp reduction in real wages and the recurrence to measures such as unpaid leave, salaries paid in kind and wage arrears. Countries such as Turkmenistan and Uzbekistan managed to increase employment despite the output fall. Opposite is the situation for the CEE countries. All CEE countries except Croatia, Romania and the Slovak Republic reduced employment at a faster pace than output. The CEE countries which have performed better such as Poland, Slovenia, Hungary and the Czech Republic have shed labour at a rate superior to the output loss, thus maintaining or increasing output per worker. If we measure productivity as a simple output/employment ratio, than it is obvious that in CIS economies overall productivity declined as opposed to CEE economies with some exceptions[7].

Table 1.3. - Output and Employment decline, CIS, CEE, BS

1991-1996	Output	Empl.	'O-E Gap'	1989-1995	Output	Empl.	'O-E Gap'
CIS	**-44.9**	**-8.6**	**-36.3**	**CEE**	**-14.9**	**-16.0**	**1.1**
Armenia	-51.9	-14.1	-37.7	Bulgaria	-24.5	-30.4	5.9
Azerbaijan	-56.1	-5.0	-51.1	Croatia	-32.7	-12.2	-20.5
Belarus	-32.9	-13.1	-19.8	Czech Republic	-7.5	-9.4	1.9
Georgia	-58.7	-15.2	-43.5	Hungary	-14.5	-27.3	12.8
Kazakhstan	-34.1	-15.5	-18.6	Poland	-1.4	-14.4	13.0
Kyrgiz Republic	-41.8	-1.8	-39.9	Romania	-15.2	1.9	-17.1
Moldova	-56.8	-19.8	-37.0	Slovak Republic	-16.0	-15	-1.0
Russia	-37.8	-8.4	-29.4	Slovenia	-7.5	-20.8	13.3
Tajikistan	-59.7	-12.1	-47.5	**BS**	**-46.9**	**-12.4**	**-34.5**
Turkmenistan	-38.5	6.1	-44.7	Estonia	-31.9	-11.1	-20.8
Ukraine	-54.8	-7.1	-47.7	Latvia	-49.0	-15.5	-33.5
Uzbekistan	-16.2	2.9	-19.1	Lithuania(*)	-59.6	-10.6	-49.0

Source: CIS-Stat (1998), EBRD (1997), Allison and Ringold (1996); (*) 1992-1996

Registered unemployment rates are much lower in CIS than in CEE countries (Table 1.4). The difference can be explained as a combination of three factors. The first is what has been explained above. CIS enterprises have tended to retain

sequencing. See also McKinnon (1991)

[7] Contrary to the other statistics presented, the Baltic States seem to follow a CIS path. The Baltic States show in fact a pattern on their own in many respects. For simplicity, in other tables I aggregated the BS with the CEE given that this group contains only three countries.

labour for the various reasons illustrated. The second is that a large portion of the unemployed simply do not register in CIS countries. Emerging survey data for the CIS show that real unemployment rates are two to four times registered figures (table 1.5). Factors explaining this attitude include distance from Employment Services (ES) and transport costs, disillusionment with ES capacity to find work, poor ES provision and low level of unemployment benefits. The third factor is the large flow of workers out of employment and into economic inactivity. Early retirement, women turning to housework and the 'discouraged unemployed' effect have been larger phenomena in CIS economies than in CEE. Also, in some CIS countries, emigration has been an important exit channel from the labour force.

Table 1.4. - Registered unemployment (% of the labour force, end of the year)

	1989	1990	1991	1992	1993	1994	1995	1996	1997
CEE and BS	**0.8**	**1.4**	**5.4**	**8.0**	**10.1**	**9.5**	**9.5**	**9.2**	
Bulgaria	0	1.5	6.7	13.9	16.7	12.4	11.1	12.5	
Czech Republic	0	0.8	4.1	2.6	3.5	3.2	2.9	3.5	
Estonia		0	0.1	1.7	5	2.2	5	5.2	
Hungary	0.5	1	4.1	10.7	12.9	10.4	10.4	10.5	
Latvia		0		2.1	5.8	6.3	6.5	7.1	7.1
Lithuania		0	0.3	3.9	3.4	4.4	7.3	6.2	5.4
Poland	0.3	3.4	8.7	12.7	14.8	16	14.9	13.6	
Romania			3	8.4	10.2	11	8.9	6.1	6.8
Slovak Republic		0.6	11.8	10.4	14.4	14.6	13.1	12.8	12.8
Slovenia	3.2	5.3	9.5	13.8	14.4	14.5	14.5	14	14.1
CIS			**0.05**	**0.7**	**1.3**	**1.6**	**2.5**	**3.1**	**3.2**
Armenia				3.4	6.2	5.8	8.2	10	10.6
Azerbaijan			0.1	0.2	0.7	0.8	1	1.1	1.3
Belarus			0.04	0.5	1.4	2.1	2.9	4	3.1
Georgia								1.4	2.4
Kazakhstan			0.05	0.4	0.6	1.1	2.1	4.2	3.9
Kyrgiz Republic			0.01	0.1	0.2	0.8	3	4.5	3.2
Moldova			0.005	0.7	0.8	1.2	1.4	1.4	1.6
Russia			0.08	0.8	1.1	2.2	3.2	3.4	2.9
Tajikistan				0.4	1.1	1.7	2	2.6	3.1
Ukraine			0.03	0.3	0.3	0.4	0.5	1.5	2.4
Uzbekistan				0.1	0.2	0.3	0.3	0.3	0.4

Sources: Porket, J (1995), ILO (1995), Jackman (1995a), Nesporova (1998), Godfrey (1995), CIS-Stat (1998), IMF (1998), Godfrey and Richards (1997b)

Table 1.5 - Unemployment from Surveys (% of the labour force, selected countries)

	1991	1992	1993	1994	1995	1996	1997
CEE and BS							
Bulgaria			21.4	20		13.5	
Czech Republic			3.9	3.7	3.5	3.9	
Hungary		9.1	11.2	10.1	9.4	10	
Lithuania						14.2	
Poland			12.9	13.8	14	11.6	
Romania			8.2	8.2	8	5.8	
Slovak Republik	7.8	12.7	12.4	13.4		10.7	
Slovenia			9.4			7.3	
CIS							
Kazakhstan						11.1	
Kyrgistan			1,7	4,1	5,7	7,8	
Russia		4.9	5.5	7.5	8.2	9.3	9
Ukraine					5.6	7.6	8.9

Sources: Porket, J (1995), ILO (1994); Allison and Ringold (1996), (1) 1996 KLSMS, Bank of Finland (1998), Republic of Ukraine (1998)

In spite of the much lower registered unemployment rate, CIS economies reached already in 1994 an unemployed/vacancy (U/V) ratio comparable to the average CEE level. Differences in this respect between countries are substantial but it is evident that CIS economies have been 'catching up' fairly quickly with the CEEs. In 1992 the average ratio for CEE countries was 34.6 unemployed per vacancy against a ratio of 11.7 in CIS countries. By 1994, the same average ratio was 36.5 in CIS countries while in CEE remained around 35[8].

Thus, the output shock in CIS economies has been transmitted only in part on employment and among those who exited employment only a small part refer to employment services. This suggests that employment has changed its nature and that a large number of job-seekers are not monitored by the authorities and may not be visible in government statistics. What is behind these macro trends and how did these changes affected the reallocation of labour?

[8] Calculated from Boeri (1996) and CIS-Stat (1998)

6. Explaining labour market changes

In the Socialist system, work was both a duty and a right for the Socialist citizen. The Soviet concept of *nezaniatye* (not employed) was used to define those who for some justified reason were not employed. In the Soviet Union and in CEE countries, the general understanding was that the economies faced labour shortages rather than excess of labour (Nuti 1996). At the same time, labour within enterprises has often been described as little productive and labour hoarding was a recurrent practice. Thus, as Kornai (1992) pointed out, labour shortages in the market and labour surpluses in enterprises co-existed in a socialist system. Labour was at times scarce, poorly allocated or little productive. This phenomenon was structural in that it was determined by the nature of the planned system. Production targets were set at the central level and fluctuations in these targets encouraged managers to hoard labour to be able to face sudden changes. Labour size also provided the status and prestige of the enterprise and managers competed for workers.

During the first phase of transition it was understood that the process of change would have affected both employment and unemployment. Blanchard (1997) argued that the process of privatisation was going to drive the reallocation of labour in a three stages process. In the first phase, the state sector reduces employment with immediate increase in unemployment. This is followed by the growth of the private sector and absorption of workers from the unemployment pool. In the final stage the growth of the private sector takes over state employees straight out of state employment. A similar model was proposed by Chada, Coricelli and Krajnyak (1993) who saw a two stages process with an initial reallocation of resources from the state to the private sector accompanied by a sharp increase in unemployment. This should have been followed by a phase where the reached level of unemployment and human capital determined a reprisal of growth and a decline in unemployment.

The basic mechanisms described by early models have been useful as initial tools of analysis of a radically new process of change but the underlying logic supporting the models has not found strong support in the experiences of transitional economies to date. Labour flows did not follow the expected path state employment-unemployment-private employment. In CEE countries, employment declined in line with output but the dynamics of the reallocation of labour from the state to the private sector seems rather different from the one predicted by the models. The unemployment pool tend to be stagnant with a low inflow and an even lower outflow rate (Boeri 1994). Unemployment grows rapidly but the turnover is low with a clear tendency to long term unemployment. The reduction in employment partly turned into 'exit' from the labour force rather than into unemployment (Koltay 1995). Labour Force Participation Rates (LFPR) have been declining almost everywhere and the reallocation of labour when it occurs is often a direct migration from the state to the private sector with no stops in the unemployment pool. The number of 'exhaustees' (those who are no longer entitled to benefits) has been increasing in most countries and the 'discouraged unemployment' effect contributed to the decline in labour force participation.

These peculiar trends of the labour market have been observed also in CIS economies where labour market studies have been carried out. For instance the Russian labour market has shown very similar characteristics to those described for CEE economies (Layard and Richter 1995) though the intensity of the phenomena seems to be larger and more worrying (Standing 1997). With time, it was expected that labour markets would have normalised towards OECD-like type but until recently these same trends have shown to be persistent (Boeri, Burda and Kollo 1998).

It is also uncertain the relation between the processes of privatisation and restructuring and unemployment depicted by early models. According to Boeri (1994) there is no direct relation between the process of privatisation and the rate of unemployment as shown by the contrasting experiences of the Czech republic and Romania, and according to Jackman (1995) and Jackman and Pauna (1997)

there is no evidence of a relation between the process of restructuring and the rate of unemployment. For these authors unemployment is not a necessary element of an efficient process of restructuring and reallocation of resources.

Two further assumptions on transition derived from orthodox economic theory and popular during the early years of reforms were that - following privatisation, price liberalisation and macroeconomic stabilisation - labour would have moved from declining and non profitable sectors to growing and profitable sectors and that a spontaneous private sector growth would have occurred absorbing with time redundant state workers.

A certain reallocation of labour certainly occurred across economic sectors. For instance, services and in particular financial services, banking and insurance increased in terms of employment virtually everywhere while heavy industry and construction contracted in most countries. The share of employment in different economic sectors changed remarkably in virtually all economies considered. Nonetheless, it is somehow misleading to interpret such changes as a testimony of labour reallocation across sectors. In some CEE economies and in most CIS economies this apparent reallocation reflects an asymmetric shock in different sectors rather than a real movement of workers between sectors. The sectors' shares of employment changed significantly while it remain uncertain how many workers really changed job moving from one sector to another.

The private sector growth was initially idealised in two forms. On the one hand, privatised enterprises facing a hard budget constraint would have prospered or died. On the other hand, a New Private Sector (NPS), i.e. the birth of a new class of entrepreneurs, was going to progressively become the growth engine of these economies. Privatised enterprises have generally shown poor performances, but where NPS enterprises have emerged it has been shown that they outperform both privatised and state enterprises (Richter and Schaffer 1996). While this is good news, it is not clear how large this new sector really is. Most newly registered businesses seem to be the fruit either of privatisation or of internal subcontracting.

For instance, large former state distribution networks have been split among individual retailers while large enterprises have found easier to sub-divide production in different stages and create legally independent entities. Naturally, the latter is a very useful 'coping' strategy but it is doubtful whether these new companies are really new or independent. Thus, the NPS idealised as a class of new entrepreneurs who borrow money from a bank, set up a new activity and develop in a healthy manner has not been proven to be a determinant source of growth at this stage, at least in CIS countries.

The reallocation of labour from the state sector to the private sector and the reallocation across economic sectors have absorbed much research effort in these years while other aspects of labour reallocation have received less attention. The rural-urban migration of labour or the movement of workers from the formal to the informal sector have been acknowledged but the underlying implications of such changes have been little studied. By contrast, the study of developmental processes and the study of developing nations relied extensively in the past on rural-urban and formal-informal frameworks to understand the fundamental processes of change (Lewis 1954, Harris and Todaro 1970). In transitional economies, it is now recognised that the informal sector has been growing steadily while rural-urban migration has been a significant phenomenon in both directions.

In fact, among all dynamic changes in the labour market, the most significant phenomenon has been the reallocation of workers from dependent to independent activities, from wage to non-wage work. This form of reallocation has been most evident as a movement from state employment to self-employment and has been a significant trend in all transitional economies. In CEE countries this phenomenon occurred particularly between 1989 and 1992 (the years of the recession) but continued during the period 1993-1995 (the years of the recovery). In 1995, the share of self-employment in total employment was 29.9% in Poland, 38.3% in Romania, 11.5% in Bulgaria, 11.6% in the Czech republic, 10.6% in Hungary and 6.5% in Slovakia (Boeri, Burda, Kollo 1998). Self-employment growth is even more visible in CIS economies. The share of self-employment in total

employment increased in all countries, particularly in the Trans-Caucasian and Central Asian regions (Table 1.6).

Table 1.6 - Self-employment (% of total employment)

	1991	1992	1993	1994	1995	1996
Russia		**6.1**	**8.3**	**9.5**	**10.1**	**11.2**
CIS-Europe	**3.0**	**5.4**	**5.7**	**8.2**	**8.0**	**8.1**
Belarus	2.2	2.9	4.2	5.6	7.2	5.1
Moldova	13.4	15.4	13.9	16.2	14.2	12.4
Ukraine	2.4	5.1	5.5	8.1	7.7	8.4
Trans-Caucasus	**15.4**					**37.6**
Armenia	19.9	29.8	30.4	34.0	37.4	41.5
Azerbaijan	16.1	18.3	19.2	21.6	26.1	29.3
Georgia	11.6					46.4
Central Asia	**12.1**	**13.3**	**14.8**	**18.7**	**23.6**	**29.2**
Kazakhstan	4.3	5.3	5.9	9.3	17.9	24.0
Kyrgiz Republic	13.1	17.1	18.6	29.3	43.9	50.0
Tajikistan	19.1	21.0	23.1	23.5	30.9	33.7
Turkmenistan	15.6	16.2	16.3	16.8	17.7	19.0
Uzbekistan	16.7	17.5	19.2	23.3	23.5	30.1

Source : CIS-Stat (1998)

The share of self-employment in total employment in OECD countries is very variable and it is not *per se* an indicator of well being or malaise of a nation . In principle, the category self-employment is not homogeneous and it contains professional practitioners as well as shop-keepers, farmers or street vendors. In developing nations self-employment is often associated with farm and household labour in rural areas or with informal work in urban areas. In transitional economies self-employment has not been really studied and it simply indicates the number of people who exited wage employment and entered non-wage employment. Since wage employment has been traditionally associated with state employment and self-employment is private by definition, this form of reallocation has been interpreted as a form of state-private reallocation of labour. It is, in fact, the main form of state-private reallocation of labour given that the growth of private wage employment has been relatively small if compared to the growth of self-employment.

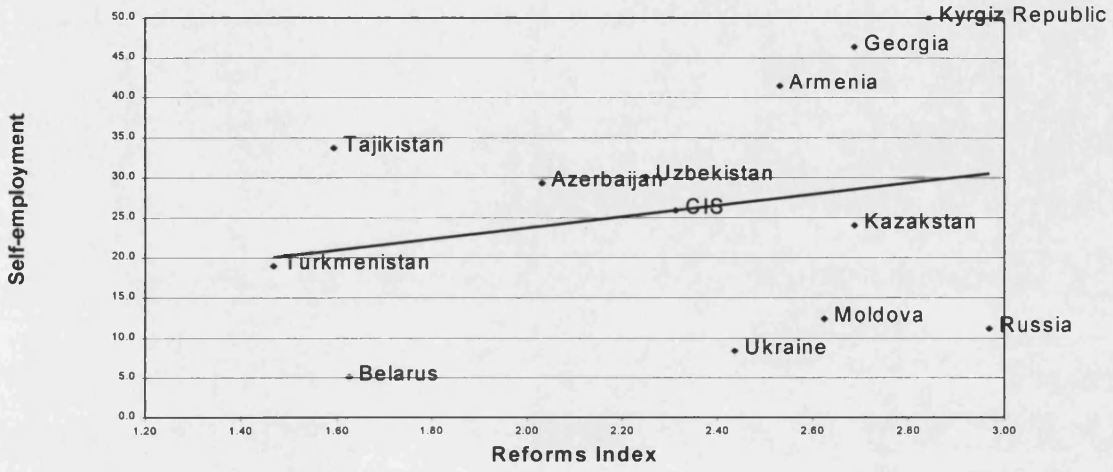
This wage employment/self-employment reallocation of labour deserves attention. If this trend has been determined by 'push' factors, i.e. by labour shedding on the

part of enterprises, we should study what self-employment really means in terms of welfare and opportunities for those who were forced into it. If, instead, it is the product of 'pull' factors and a free choice, then we should ask what is wrong with wage employment and what is attractive in self-employment. The choice of self-employment in principle is a 'hard' choice in transition. First because it is a new condition to which people have to adapt. Second, because to wage employment have been traditionally attached social services such as health, education and transport provisions which came mainly free of charge. And third because private provisions of these same services is still in a very early stage, it is expensive and it does not currently offer a real alternative to public provision. Thus, those taking up self-employment take a substantial risk and if this is their choice self-employment must be an attractive sector indeed when compared with wage employment.

Given the current trend, the future of transitional economies will have to rely partly on the self-employment sector as one new engine of growth. The question is whether self-employment is simply the by-product of privatisation or it entails a real growth of new activities. And, if this is the case, whether this real growth of activities is occurring in potentially value-added sectors or, rather, in subsistence activities. Moreover, we should ask if this sector is a temporary creation structurally in-built in the process of transition and therefore destined to decline in the long run or if, instead, it is a condition to remain.

The understanding of this aspect of the labour market may be critical to assess the impact of reforms and the growth potential of transitional economies. For the CIS economies, the reforms index constructed on EBRD (1997) data seems to be positively related with the share of self-employment in total employment (Chart 1.5). And, if we plot growth rates between 1989 and 1996 against the share of self-employment in 1996 it is suggested that the deeper the recession has been, the larger is the share of self-employment (Chart 1.6). The same cannot be said for CEE countries.

Chart 1.5 - Self-employment and Liberalisation (CIS, 1996)



Source : EBRD (1997) and CIS-Stat (1998)

Chart 1.6 - Self-employment and GDP growth (CIS)

Source : Table 1.1 and CIS-Stat (1998)

7. Conclusion

What has emerged from the political turmoil of the late 1980s and from the break-up of the Soviet Union is a scenario cause of controversy where the socio-economic costs attributed to the process of transition have so far outweighed the benefits in the CIS. While it is early to judge the wisdom of the choice undertaken by the former Socialist countries, it is time to assess the current state, evaluate the choice of reforms and speculate on future prospects. The developments observed in transitional economies took by surprise observers and forecasters and a fresh look and reconsideration of events is due to those who are suffering under these historical changes.

There seems to be a persistent dichotomy of experiences when we compare CEE to CIS countries exemplified by the U and L-shaped output paths. The developments occurred in the CIS countries took a particular negative turn which is reflected in macroeconomic variables and in labour market developments. In particular, the picture presented for CIS countries suggests that labour markets are adjusting in a slow fashion, real restructuring is sluggish and the emergence of the new private sector still has to play the role which is helping some of the CEE economies out of the recession. The labour market difficulties observed in both groups of countries are exacerbated in the CIS. Opportunities are scarce and people are more disillusioned with the situation.

These changes have determined a rapid growth of self-employment rather than the expected growth of new private enterprises. This has changed the profile of the labour market and has introduced new elements in the understanding of the reallocation of labour during the transition. Understanding the nature of self-employment becomes in this way an important means to comprehend current labour dynamics and future prospects. The next chapter will propose a framework to think about the relation between macroeconomic changes and labour market developments where self-employment becomes central to the analysis.

CHAPTER 2

TOWARDS A MODEL OF TRANSITION FOR THE CIS

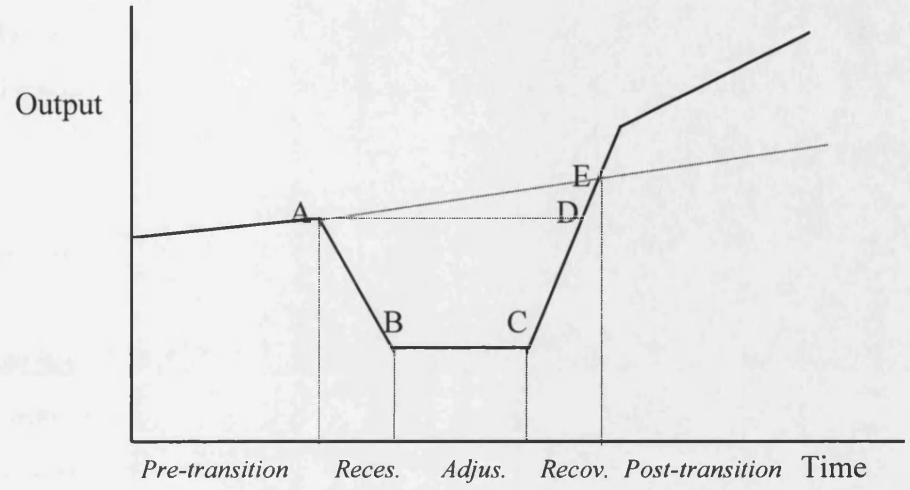
This chapter presents a simple framework to think about transitional economies with L-shaped output progress and the reasons behind a slow recovery. As previous models, labour reallocation is central to the analysis of transition and the economy is studied in a multi-sector framework. Additional elements include recession dynamics, the role of self-employment and economic inactivity and the analysis of labour supply in a sector choice framework.

1. Stages of transition

The economic rationale for embarking into the process of transition was to ameliorate the pre-transition growth rate and accelerate the process of convergence of former Socialist nations towards OECD standards of output per capita. Capitalising on the experience of the process of transition to date, it was shown in Chapter 1 how, roughly speaking, U-shapes and L-shapes forms of output developments could be attributed to CEE and CIS countries respectively.

Formally, we could imagine the process of transition as broken down into distinct and identifiable stages in the same spirit as Rostow imagined the stages of economic development of a nation. We can imagine a pre-transition state characterised by slow growth and a post-transition stage characterised by faster growth. The process of transition, i.e. the process of change required to pass from a pre-transition to a post-transition scenario can be idealised as composed of three stages : 'Recession', 'adjustment' and 'recovery' as illustrated in Chart 2.1.

Chart. 2.1 – Stages of transition



While most CEE countries seem to be on a recovery path (C-D in the diagram), most of the CIS countries still seem to struggle with the adjustment phase (B-C). In a CIS context, the different stages could be described as follows:

Pre-transition is the situation before the introduction of major transitional reforms early in 1990. Enterprises are still mostly state owned, prices are fairly stable, the industrial linkages are built around the Comecon network protected from global competition by trade boards. Russia is still subsidising the other republics.

Recession is when the Soviet Union has broken down, Russia cuts subsidies to other republics, prices are liberalised, privatisation begins, trade barriers are lifted, Comecon collapses, the industrial linkages break down, the payment system is disrupted, there is hyperinflation, real wages, pensions and social benefits slump in real terms, the new independent republics begin to build the state and its institutions, the new currencies are introduced, output declines by as much as 30-40%. Employment starts to decline and unemployment starts to grow. This is the period between 1990 and 1994.

During adjustment, the newly established state institutions start to operate effectively. Central banks acquire monetary control, inflation is curbed,

privatisation is well advanced, a modern banking system is being established. Thanks to privatisation, the state sector has declined substantially and is being replaced by the private sector. The rate of investment is very low. Employment declines further and unemployment keeps growing. Output may show first signs of recovery. This is the bottom of the recession. Capital has de-cumulated severely and employment has declined, though less than output. This is the situation experienced by most CIS countries starting from 1995.

Recovery is when output is back on a growth path, savings and investment gain momentum, institutions are well established, privatisation is completed, efficient restructuring is taking place, private employment is growing and offsets state employment decline determining a first decline in unemployment. How to engineer the recovery is the central policy question that remains unresolved in the CIS to these days.

Finally, during the post-transition stage, output has reached a long-term steady growth pattern with growth rates higher than the pre-transition period, the private sector is the engine of the economy and markets regulate exchanges.

Associated with the transition stages, progress could be monitored with a number of different output targets such as re-establishment of output growth (from C on the diagram), re-establishment of pre-transition output levels (point D), the achievement of output above what the pre-transition growth rate would have allowed for (from E) and the convergence towards OECD levels of income per capita. Transitional economies facing an L-shape transition today should, sooner or later, reach their pre-transition output levels. In the long run, transition may simply look like a negative business cycle. However, all economies considered and in 1997, only Poland had reached its pre-transition output level. Fischer, Sahay and Vegh (1998) estimated that *'(...) it will take around twenty years for the faster reformers to reach current OECD per capita income levels.'* (p. 34).

The time necessary to 'bounce back' to the pre-transition level of output also depends from the depth of the recession experienced. Recession and growth are not symmetric processes. A 10% output decline is not equivalent to a subsequent 10% growth. A 20% recession needs a 25% growth rate to re-establish the pre-recession level of output and a 40% recession needs a 67% growth. For a country that experienced a 40% output decline it will take between ten and eleven years just to reach the pre-transition output level at a 5% annual growth rate. Thus, the depth of a recession is important for growth prospects and post-recession growth paths cannot be compared unless the extent of the previous recession is taken into consideration. Thus, in output terms, the process of transition is a process of long-term changes that may span over a period of twenty, thirty or even forty years depending on the country considered. In this sense, it is well justified to attempt to elaborate a theory of such process.

2. Models of transition

Several economists have been interested in modelling the transitional process. Popular models concerned with the process of reallocation of labour have been those of Chadha, Coricelli and Krajnyak (1993), Aghion and Blanchard (1993), Blanchard (1997) and Commander and Tolstopiatenko (1998). Rather than describing the models, the focus here is on identifying some of the common elements and some of the problems that these elements may have in explaining empirical evidence in a CIS context.

Models of transition tend to see economies as segmented into two sectors, a private and a state sector. The two sectors are defined in terms of the goods they produce. The state sector produces subsidised and less competitive goods, the private sector produces internationally competitive goods. Production in the private sector is generally Cobb-Douglas (not in Blanchard 1997), private firms are profit maximisers and pay workers the marginal product of labour. State firms produce at zero profits and pay the average product of labour. Incentives and

behaviour of operators in each sector are therefore different and the bargaining process occurring in enterprises follows different rules.

It is this behavioural asymmetry which allows for unemployment to exist and for the reallocation of labour to occur. Better workers are attracted to better jobs and the reallocation of labour is unidirectional from the state to the private sector. Unemployment emerges as the difference between the decline in state sector employment and the growth of private sector employment. The level of unemployment is instrumental in determining the reallocation of labour. High unemployment keeps wages low and allows the private sector to survive and grow during the early stages. Eventually, private employment will grow fast enough to offset state employment decline and unemployment will start to decline.

Perhaps the most comprehensive of these models is Blanchard (1997). In this model, *Reallocation* of resources from the less to the more competitive sectors and *restructuring* of state enterprises are the two basic mechanisms which shape the transitional process. *'Disorganisation'*, defined as the disruption of inter-industrial relations and the organisation of production is analysed as one of the principal causes of the initial output decline. *'Derailments'* are those transitional paths which may be followed if distortions, such as excessive insiders' control able to constrain the restructuring and reallocation processes, take place. If 'derailment' occurs, restructuring may never gain momentum, private sector employment may not grow and unemployment may grow indefinitely. The model draws to a great extent from the experience of CEE countries. The case of Bulgaria is taken as an anomaly in this context and the hypothesis of 'derailment' is constructed around this particular case.

In a wider transitional context, L-shaped economies are numerous and tend to be concentrated among CIS economies. As Chapter 1 showed, Bulgaria could well belong to the CIS group in terms of transitional performances. Have CIS economies embarked on a derailment path and should we expect unemployment to grow indefinitely?

In Blanchard model, 'derailment' entails an indefinite growth of unemployment while, if derailment does not occur, transitional models seem to share the idea that an initial fast increase in unemployment during reforms is followed by a steady decline in the post-reforms period. None of these two paths can be easily reconciled with unemployment figures in the CIS. Initially unemployment growth has been very slow during a period of acute output decline. Later, when output decline slowed down, unemployment took off and it is still growing at considerable speed nine years into reforms. Moreover, despite the slump in wages and a presumably large labour supply, the private sector as imagined in the models has not been able to emerge as a substantial force of change.

In transitional models, unemployment is looked at as a direct consequence of employment reductions in enterprises. If employment declines in the state sector and does not increase in the private sector, then unemployment grows. Employment, in turn, is seen as a fundamentally labour demand induced phenomenon. If employment in the state sector is not declining as it should, or if employment in the private sector is not growing as it should, this is due to distortions which affect the demand for labour. The government is too tolerant with enterprises in difficulties, managers are too benevolent towards workers, insiders' power slows down the restructuring process and employers 'buy' workers' consensus, wages are not paid or paid in kind to keep workers on the books. An unlimited supply of labour is generally assumed in times of recession and transition.

In contrast with these assumptions, administrative data and households surveys throughout the CIS show three important aspects of the labour market. One is that the category of 'self-employment' is very large and growing as it was shown in chapter 1. In fact, it is often the only category of employment visibly growing. The second is that labour turnover is high even in the state sector despite the poor record of output and employment. And the third is that workers often leave enterprises because of their own decision. Workers decide to quit employment and

take up alternative opportunities such as early retirement, house duties, informal employment or home production. This suggests that there is an opportunity cost in working for the formal state and private sectors other than leisure and other than the reservation wage determined by unemployed benefits.

In the models described the focus of attention is the enterprise and the role of incentives and disincentives affecting individuals within enterprises. In this sense, these models take a demand side approach to the study of transition and the labour market. In so doing, however, the role of employment outside enterprises, including employment in collective organisations such as cooperatives and self-employment, is marginalised. So is the impact that non-enterprise employment has on the functioning of the labour market and on the determination of wages and unemployment. The wage is thought of as the price emerging from the supply-demand dynamic occurring in enterprises while income opportunities outside the enterprise are bundled into a 'reservation' wage. Thus, the income of the self-employed does not occupy a distinctive role in such models.

While justified by the rigour of simplicity, omitting self-employment from the structure of transitional models may hide some important aspects of the labour market. Self-employment naturally positions itself between wage employment, unemployment and economic inactivity, thus becoming an important 'pool' interacting with these latter conditions. Also, in the context of transition, the study of self-employment represents the ideal ground to explore whether market principles and concepts have filtered down to individuals and entrepreneurs and to see towards what kind of labour markets transitional economies are converging to: A developed, dynamic and flexible labour market of a OECD type or a stagnant and largely informal labour market typical of poor developing economies. Is self-employment the nursery for the enterprises of the future or is it an alternative definition of a subsistence sector?

For some authors, entrepreneurial abilities explain the birth and development of new firms and self-employment is seen as a first stage of a positive cycle of

entrepreneurial and economic development (Lucas 1978, Blau 1987). For others, self-employment emerges during recessional periods and in times of high unemployment. Oxenfeldt (1943) saw self-employment as an 'escape from unemployment' and Storey (1982), Johnson (1986) and Hudson (1987 and 1989) seem to find evidence of correlation between unemployment and self-employment. Whether we are more sympathetic to one vision or the other, self-employment is an important sector to monitor during a process of rapid change[1].

3. Towards a model for the CIS

A model that attempts to explain employment and unemployment dimensions in a CIS context may consider more closely a number of aspects. The first is the nature of the recession and its relation with the transitional process. A second is the existence of an alternative sector to state employment that cannot be characterised as private sector in the Blanchard sense. This is constituted by individual workers generally grouped in the category 'self-employment'. A third is the existence of a pool of formally economically inactive individuals who actually attribute an economic value to home duties because of the transitional changes occurring. And the fourth, aiming at putting together the above aspects, is the study of labour supply in transition.

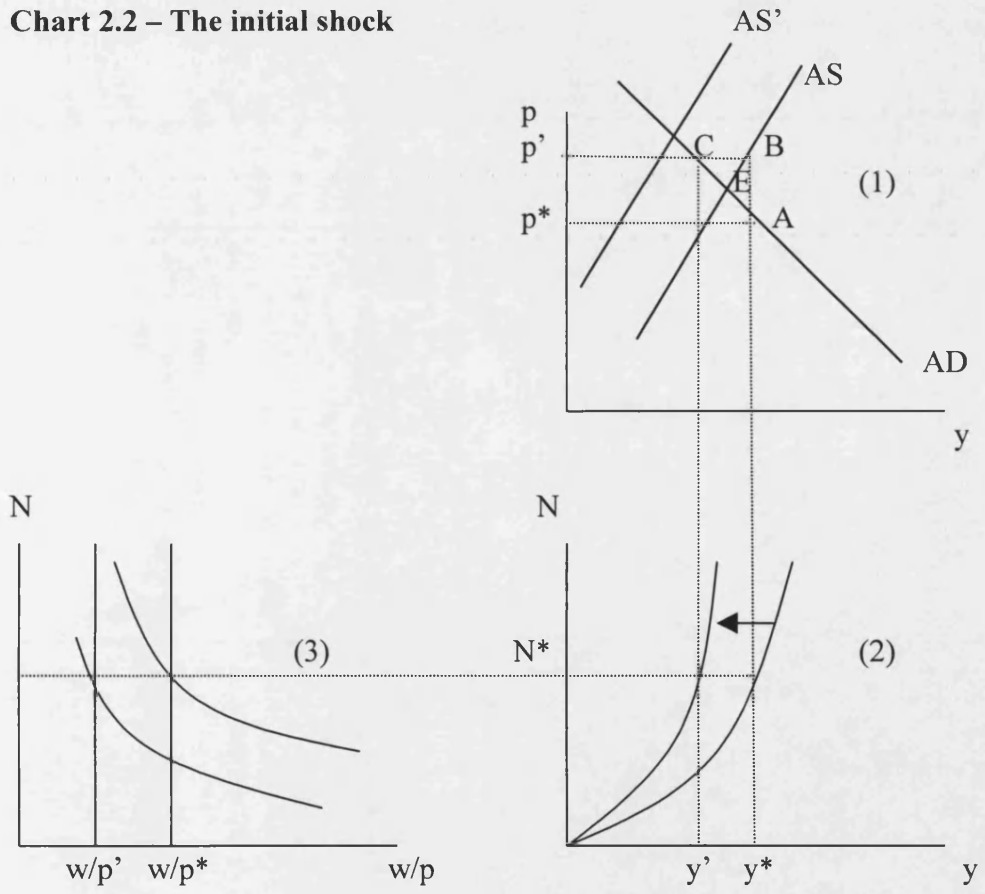
3.1. The initial shock, recession dynamics and the state sector

The first major output shock experienced by the Soviet Union and the post-Soviet republics occurred between 1991 and 1992 as a consequence of two fundamental reforms. The first was the quasi-total liberalisation of prices implemented in three

[1]Self-employment overlaps considerably with the informal sector in a transitional context. In fact, studies of developing economies often use the term self-employment and informal sector interchangeably. I prefer the category self-employment for different reasons. First, I find that what is important for a successful transition, at least in the short-term, is whether value added is being created rather than to see whether this is created in formal or informal activities. Second, distinguishing between employees (state or private) and self-employment is important for the study of entrepreneurial abilities as the literature suggests and entrepreneurial abilities are perhaps the most important human development aspect to be monitored in transition. Third, the definition conforms to the old and new employment classification used by CIS statistical offices as well as to the ILO international classification of labour.

stages (January and April 1991, January 1992) and the second was the decision to break-up the Soviet Union in December 1991. The combination of these two reforms initiated a period characterised by hyperinflation and the disorganisation of production. In particular, the disorganisation of production entailed a disruption of inter-industrial relations and customer-suppliers relations between firms located in different republics of the union. This phenomenon alone was responsible for a steep fall in production from early 1992 to 1994, far greater than any loss of aggregate demand during the same period would have justified. Therefore, the very initial shock can be characterised as an adverse shock to firms' production exogenously induced as illustrated in chart 2.2.

Chart 2.2 – The initial shock



Where, N is labour, p is price, w/p is the real wage, y is output and AS and AD are aggregate supply and demand respectively. Figure (1) illustrates aggregate

demand and supply, figure (2) is the production function and figure (3) represents the labour market.

Initially (A), the product market is in disequilibrium with excess demand for goods and services, controlled prices (p*) and planned production (y*). With the first price liberalisation reforms, enterprises transfer the increase in producers prices onto consumers and production and employment are maintained while real wages decline. (from A to B in figure 1 and from w/p* to w/p' in figure 3). Eventually, consumers adjust to the price and real wages shocks reducing demand for goods and services (from A to C). With the break-up of the Soviet Union and subsequent disorganisation of production firms experience a collapse in production (from y* to y'). This shifts the aggregate supply curve to the left (from E to C) which would theoretically lead towards equilibrium in 'C'. However, production difficulties continue over the first few years and production continues to decline while aggregate supply keeps moving to the left (to AS') maintaining in effect excess of demand and keeping pressure on prices.

This basic dynamic continued in most of the countries of the FSU for well over three years into 1994, it characterised the essential features of the state sector and accompanied the introduction of transitional and state building reforms. Moreover, the decline in state sector output and the reduction in bilateral subsidies from Russia meant, for the peripheral countries of the FSU, a substantial fall in government revenues and an increase in budget deficits. The labour market remains with excess of supply throughout the period as state firms reduce irreversibly employment needs while other sectors are still in their infant state. A real money market as such hardly exists as the new banking sector is in the making, but inflation is eroding real money balances quickly while the nominal supply of money is not under control. Therefore the recession is characterised by different forces which push the curves to the 'left' of the diagrams with lower levels of output, employment and money.

3.2. The economy during the adjustment phase

We can imagine the adjustment period as a period of convergence towards a new equilibrium characterised by lower output and employment. Following the initial recession and transitional reforms the economy now features a smaller state sector and three relatively new sectors; the private sector, the self-employment sector and unemployment. These three sectors have expanded and absorbed at least part of the workforce exiting the state sector. Other workers have moved into economic inactivity. Given a potential workforce[2] *(N)* assumed to be constant and normalised to one the following holds:

$$(1)\ N = N_{st} + N_{pr} + N_{se} + N_u + N_{ei} = 1$$

With: N_{st} = State employees; N_{pr} = Private employees; N_{se} = Self-employed; N_u = Unemployed and N_{ei} = Economically inactive. The state and private sectors represent enterprise or wage employment. They are the 'formal' sector in that they pay taxes and are possibly entitled to subsidies. The self-employed do not pay taxes or receive subsidies but they contribute to output and employment.

The government budget constraint

Following the long period of economic and monetary instability, the government is now committed to balancing the budget. This implies the following government budget constraint where the employment fund is managed independently:

$$(2)\ T = G$$

$$(3)\ \mu\left(W_{st}N_{st} + W_{pr}N_{pr}\right) = W_u N_u$$

$$(4)\ \left(\tau + \mu\right)\left(W_{st}N_{st} + W_{pr}N_{pr}\right) = \sigma\left(W_{st}N_{st} + W_{pr}N_{pr}\right) + W_u N_u + I_g + C_g$$

[2] By potential workforce I mean the adult population potentially able to work excluding full-time students, 'full-time' pensioners and individuals disabled to work due to physical conditions.

With: T = Government revenues; G = Government expenditures W_i = Wages; N_i = Employment; $W_i N_i$ = Wage bill; i = *(st, pr, se, u)*; I_g = Public investment; i = Tax rate (% of wage bill); μ = Employment fund contributions (% of wage bill); σ = rate of subsidies (% of wage bill), C_g is government consumption with $\tau, \mu, \sigma < 0$.

Consumption, expenditure and the money market

Households do not save and do not borrow from banks. In fact households do not hold bank accounts. This is explained by the long exposure to hyperinflation during the recession period that eliminated previous savings held in banks and induced household to convert new savings into consumption. All disposable income is consumed. State enterprises operate at zero profits but keep liquidity in banks at zero real interest rates. Private enterprises generate profits and savings (S_{pr}), which are deposited into local banks. Household consumption is represented by the wages net of taxes and employment fund's contributions[3], self-employment income and unemployment benefits as follows:

$$C = (1 - \tau - \mu)(W_{st} N_{st} + W_{pr} N_{pr}) + W_{se} N_{se} + W_u N_u$$

Given (3):

$$(5)\ C = (1 - \tau)(W_{st} N_{st} + W_{pr} N_{pr}) + W_{se} N_{se}$$

Therefore expenditure and income are:

$$Y = E = C + G$$

$$E = (1 - \tau)(W_{st} N_{st} + W_{pr} N_{pr}) + W_{se} N_{se} + \sigma(W_{st} N_{st} + W_{pr} N_{pr}) + I_g + C_g$$

$$(6)\ E = (1 - \tau + \sigma)(W_{st} N_{st} + W_{pr} N_{pr}) + W_{se} N_{se} + I_g + C_g$$

With: Y = Income; C = Consumption and E = Expenditure.

The money market is experiencing growing real interest rates. This is because of a combination of factors. The stock of money available to the credit system has

[3] For simplicity we assume that unemployment benefits are the only transfers levied from enterprises and paid to households.

shrunk, monetary policies are restrictive, investments in domestic production activities carry high risk and the available financial capital earns better and more secure returns on the international financial market. Therefore, the savings generated from the private sector (S_{pr}), after being deposited in local banks, are in fact exported abroad.

Privatisation, the private sector and restructuring

The process of privatisation is slow during the recession because the FSU republics are busy building the new state institutions including the executive, legislative and judicial branches. Privatisation occurs first in small-scale activities such as in the housing, retailing and small production spheres. During the adjustment phase, privatisation plans gain momentum. Some large enterprises find foreign buyers while others remain state-owned, most medium enterprises are transformed into mixed forms of ownership where the state usually maintains important shares and small businesses are sold to the public.

During this period, the private sector formally consists of privatised enterprises, individual owners (self-employed), who bought off small ex-state activities or started a new business, and newly established private firms (New Private Sector - NPS). Maintaining the self-employed as a separate sector in its own right, the private sector is then constituted by privatised and NPS activities. For this sector to become 'private' in the Blanchard sense it requires either a process of restructuring of privatised firms or the establishment of NPS activities. Moreover, for the private sector to become competitive on an international market a technological upgrade is needed to push up productivity. For these reasons, an injection of capital is necessary.

Assuming that insiders in privatised firms are fully committed to restructuring[4], the probability of restructuring boils down to the probability of obtaining the necessary capital to restructure or to establish a new business. Sources of capital are the local money market, foreign direct investments or grants or subsidised credits from the state. Debt issue is not an option because households do not save. Therefore, investments in enterprises (I) are met if at least one of the possible sources of capital is willing to provide the funds.

$$(7)\ I = f\left(\frac{1}{i(ii-i)}; \frac{1}{M}; \frac{\sigma}{\tau}\right)$$

The first term on the right hand side represents the probability of obtaining a credit on the domestic money market where *i* is the real domestic interest rate and *ii* is the return on financial capital invested abroad. When the domestic real interest rate increases the demand for capital decreases. When the foreign interest rate is larger than the domestic one (*ii-i* is positive) the supply of capital to the domestic financial system decreases, pushing up in a second stage the domestic interest rate. In both cases the demand for capital eventually decreases and so will domestic investments and the probability of restructuring.

The second term (*1/M*) represents the probability of attracting Foreign Direct Investments (FDI) modelled on the basis of macroeconomic stability. It is assumed that foreign investors look at macroeconomic stability to take investment decisions. M is the supply of money and stands for budget deficits and monetary instability, assuming that budget deficits are financed by printing money. When a budget deficit occurs, the government prints money, inflation increases destabilising the economy and discouraging foreign investors. The third term (σ/τ) is the probability for enterprises to obtain government grants, subsidised credits or just a reduction in corporate taxation modelled with the rates of subsidies and

[4] The assumption is rather unrealistic but the role of insiders' control in the process of restructuring has been amply explored in the literature. Here, access to capital is emphasised.

taxation used before. An increase in subsidies or a cut in taxation increase access to capital and the probability of restructuring.

It is easy to see why in this framework restructuring and NPS creation will hardly occur. The government is caught into two different dilemmas. The first is a subsidy dilemma. Either the government encourages restructuring and the creation of new enterprises with subsidies or tax cuts (therefore increasing M) or it encourages foreign direct investments with a hard budget constraint. The second dilemma is determined by the interest rate. The government can lower interest rates to encourage the demand for capital but it will discourage domestic savings from staying in the local economy by increasing the domestic-foreign interest gap. Therefore, the probability for enterprise to restructure and grow is very low due to difficult access to capital irrespective of any other internal constraints faced by enterprises.

3.3. The labour market during the adjustment phase

The working sectors

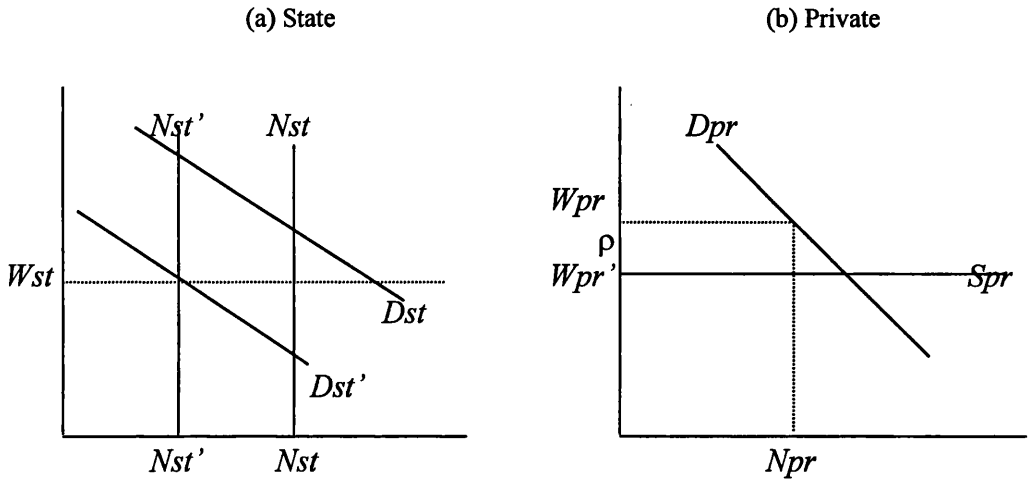
We depicted a scenario where the state sector has shrunk and the private sector – meaning enterprises producing internationally competitive goods – has remained small. We now formalise the internal labour market of each sector.

For the state sector, we can think of the demand for labour to be equal to the average product of labour as in transitional models. With employment declining more slowly than output, the average product of labour declines through the recession and so does the state wage (W_{st}). During adjustment, the wage is declining to a level equal or smaller than the largest competitive sector, self-employment. A lower wage pushes good workers towards self-employment. At the same time, state enterprises have not been reformed, they still face production difficulties and, generally speaking, they dispose of more labour than they actually need. As a coping mechanism, enterprises in difficulty simply do not pay

wages or put workers on unpaid leave. Therefore, the share of employment that contributes to budget revenues with taxes and social contributions is actually smaller than the level of employment.

The demand for labour in the private sector can be thought of as the marginal product of labour as in any competitive firm. By definition, the private sector is more competitive, disposes of better technology and needs better and more productive workers. Therefore the private sector offers on the labour market a formal wage higher than the state and self-employment sectors ($W_{pr} = W_{st}+\rho$). This is the efficiency wage argument. Private enterprises pay a premium to secure the best workers. In reality, the existing large supply of labour allows private enterprises to pay, at the end of the month, an income which is smaller than the formal wage offered and closer to the other wages available in the market. That is because private employers are aware that alternatives are scarce and that there is a cost in leaving employment represented by the risk of unemployment and the cost of moving. In other words, employers 'flag' better formal wages to attract the best workers but then pay them less knowing that leaving implies a risk and an extra cost for the worker. This constrains the expansion of private employment, unless the demand curve can be shifted to the right of the diagram by increasing technology or capital. We saw that this is problematic given the existing difficult access to capital. The private sector is also formal in that it pays taxes and social contributions as the state sector. Therefore, it is a sector that supports higher labour costs than self-employment. It is also the sector that potentially faces an increasing fiscal pressure given the reduction in contributions on the part of state enterprises.

Chart 2.3. – The state and private sectors



Concerning self-employment, the model we adopt is the basic model described by de Wit's (1993) survey of self-employment models. There is an unlimited number of individuals who can chose between self-employment and an indefinite outside option valued at '*w*'. All individuals have access to the same production technology characterised by a twice differentiable cost function *c(x)* where *x* is the level of production. The self-employed are price takers and maximise their profits 'π' chosing the appropriate production level.

$$(8)\ \max_{x}\left[\pi \equiv px - c(x)\right]$$

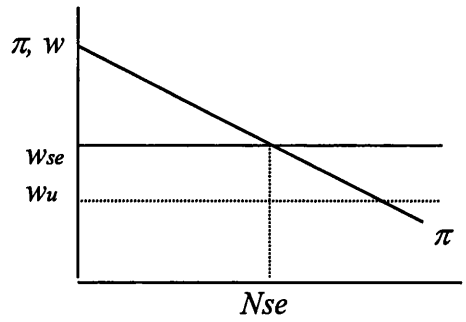
'*p*' is the price and the optimum level of production and profit can be determined as functions of *p*, *x(p)* and $\pi(p)$. It is assumed that marginal costs increase with production. Equilibrium in the product market is as follows:

$$(9)\ nx(p) = X^{d}(p)$$

Where '*n*' is the number of self-employed individuals and *X* is the demand for products. When *n* increases prices and profits decline. In other words, the larger

the number of self-employed the smaller the per capita profit. Chart 2.4 illustrates the model.

Chart 2.4 – Self-employment



The only departure from the basic model outlined by de Wit is that the self-employment profit of equilibrium during the adjustment phase is w_{se}, equivalent to what the state sector is offering. However, since the state sector continues to push workers out, self-employment can theoretically move further to the right, up to the point where profits reach the level of unemployment benefits. In other words, unemployment benefits represent the reservation wage for self-employment. As opposed to wage employment, the self-employment sector does not pay taxes or social contributions in this model.

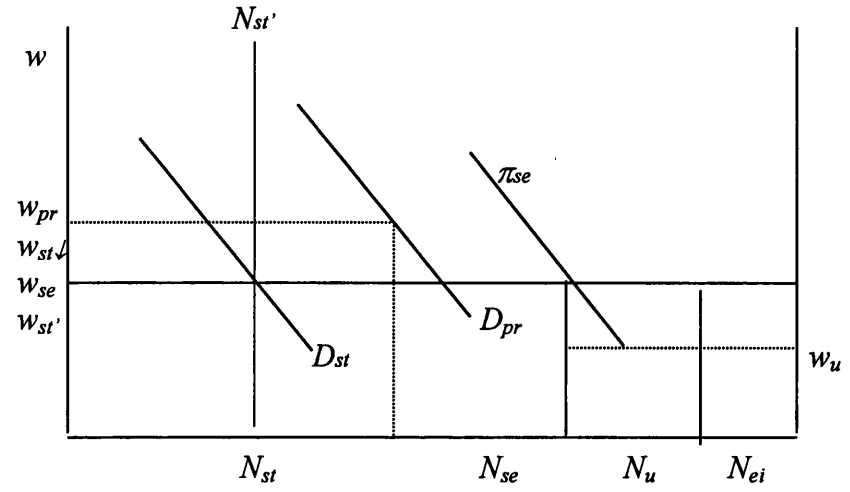
The value of w_{se} that I expect during the adjustment phase can be understood as a subsistence value. It is a quantity sufficient to provide for basic needs but insufficient to generate savings and accumulation. It could be equivalent, for instance, to a minimum consumption basket or a poverty line which takes into account minimum subsistence needs. It is assumed that such value is what the self-employment sector can offer on average during the adjustment phase. However, individuals with different characteristics will earn different profits so that the potential profit accruing to each potential participant at any point in time is different.

Despite the basic model, the literature on self-employment seems to agree that profit prospect alone explains only a limited portion of self-employment status.

Non-profit factors such as psychological attitudes to risk and change, ethnic belonging, education, job tenure, access to credits, household characteristics, family status, local economic conditions or tax regimes have been identified as some of the important elements contributing to explaining self-employment (de Wit 1993). These same factors are important determinants in any labour supply choice but they tend to increase their relative weight moving from wage employment to non-wage employment and from non-wage employment to unemployment and economic inactivity. We know, for instance, that the number of children is an important determinant of female participation while psychological attitudes to status often explains the 'discouraged' unemployment effect in many societies. We should expect the elasticity to changes in these same factors to grow in times of deep and rapid socio-economic changes.

To conclude, Chart 2.5 pieces together the different sectors examined. From left to right the state, private and self-employment sectors are illustrated while unemployment and economic inactivity are residuals measures. In particular, state employees should be thought of as split into two groups, the 'paid' and the 'non-paid', while the unemployed should be thought of as split into 'registered' and 'non-registered' depending on whether job seekers seek employment services' support or not. The non-registered unemployed should not be confused with the discouraged unemployed found in the economically inactive pool. In the model, a large number of individuals seek work actively but do not refer to state employment offices.

Chart 2.5 – The labour market in the adjustment phase



Labour supply

Following from equation (1), the potential workforce (N) is divided into five groups according to labour status: State employees (N_{st}), private employees (N_{pr}), self-employed (N_{se}), unemployed (N_u) and economically inactive (N_{ei}). At the start of the transition process (time 't') only two groups exist, the state employees and the economically inactive while private employees, the self-employed and the unemployed emerge in the course of reforms. During reforms, the state sector declines continuously while the other sectors are growing. Thus, assuming that the potential workforce has not changed in size during the period, in the post-recession adjustment phase (time '$t+1$') we find a number of ex-state workers (ΔN_{st}) in the other four sectors such as:

$$\Delta N_{st} = \Delta N_{pr} + \Delta N_{se} + \Delta N_u + \Delta N_{ei}$$
$$(-) \quad (+) \quad (+) \quad (+) \quad (+)$$

By the time the economy has reached time '$t+1$', households have been subject to major shocks including net losses in terms of savings, income, security, public provision and health. A number of coping strategies have been devised such as a reduction in consumption, exploitation of household economies of scale, home

production, barter or sale of assets. The decision to work is now affected by a number of new considerations linked to both the state of employment and to the emerging needs at home and in the community. Many public services once provided by state enterprises such as transport and kindergartens have closed down and households are now faced with the choice of providing these services themselves or paying for privately provided ones where available. The organisation of the household had to change and with it the decision to work.

We are assuming that there is an economic value in staying at home. This value is different for men and women for reasons that are both economically and socially explained. For women, this value can be thought of as equal to the available wage in self-employment, $w_{ei} = w_{se}$. If the cost per hour of hiring a baby-sitter is equal to or higher that the potential wage available to women on the labour market, the choice is obviously to stay home. Baby-sitting is precisely the kind of activity we would expect to find in self-employment and valuing female economic inactivity with the wage offered by self-employment seems appropriate.

On the other hand, men tend to have a better potential wage on the labour market which makes them more suitable to seek employment while, we assume, they do not contribute significantly to home duties. Therefore men perceive economic inactivity at a value $w_{ei} < w_{se}$. For simplicity, we can value economic inactivity for men at the level of unemployment benefits, $w_{ei} = w_u$. The best option for men would be to find employment but if this is not possible the alternatives of actively seeking employment in exchange of a small wage or leisure at home can be thought of as equally attractive. The set of choices can be illustrated as follows[5]:

[5] Labour supply theoretically involves different types of choices such as the employment participation/non-participation choice, the choice of the working sector and the choice of time to be allocated to the working sector. Working time is usually modelled as a utility maximising problem under a budget and a time constraint where the arguments in the utility function are consumption and leisure. Here, we are only concerned with the choice of the sector.

	Males				Females			
Sector choice	N_{pr}	N_{se}	N_u	N_{ei}	N_{pr}	N_{se}	N_u	N_{ei}
Income/h	w_{pr}	w_{se}	w_u	w_u	w_{pr}	w_{se}	w_u	w_{se}

The choice spectrum offered to those who are exiting the state sector is then composed of four alternatives. Two factors determine sector participation. One is *rationing*, meaning the existing constrained demand for labour. The second is individual *preference*, meaning what individual would chose in the absence of rationing. Both rationing and preference can be thought of as having two sets of determinants each. For rationing, there is a *screening* component *(Z)*, meaning the employer taste for skills, education and experience, and the *location* component *(X)*, meaning the local economic and labour market conditions. Preference is instead determined by the worker's *expected income (W)* and *household* factors *(H)* such as household responsibilities or characteristics. Schematically, sector participation involves the following factors:

$$Participation(N_j)\begin{cases} rationing\begin{cases} screening(Z) \\ location(X) \end{cases} \\ preference\begin{cases} income(W) \\ household(H) \end{cases} \end{cases}$$

The combination of rationing and preferences determines the outcome of the sector selected observed in the data. Thus, we have an individual *i* who maximises the expected utility deriving from the choice of sector *j*.

$$\max E(U_{ij}) = U\left(W_{ij}; K_{ij}\right) \qquad \begin{array}{l} with\ i = 1,\ldots., N \\ and\ j = 1, 2, 3, 4 \end{array}$$

$$j = k \quad iff \quad U_{ik} > U_{ij} \ \text{for all other} \ j \neq k$$

Where W_{ij} is the potential wage accruing to worker *i* in sector *j* and K_{ij} is a vector of variables thought to affect utility.

Determining the factors that affect sector participation is important to understand the mechanism of labour reallocation. The workers found in the private, self-employment and unemployment sectors during the adjustment phase are the product of the reallocation of labour determined by the transition process. Comparing the individual, location and household characteristics of workers across sectors should reveal whether the reallocation of labour has followed some clear sector specific pattern. This can be done empirically with a sector choice model which will be developed in chapter 5.

4. Conclusion

This chapter offered a framework to think about the adjustment phase in which many transitional economies have found themselves starting from 1995. The rapid recession determined a substantial exit of workers from state enterprises but only a few of these workers have been accommodated in new private firms. Such development turned partly into an increase in unemployment but mostly in the establishment and growth of a large self-employment sector acting as a buffer sector between wage employment, unemployment and economic inactivity.

Why does self-employment emerge? Is the growth of this sector a necessary first step to enterprise development emerging in particular stages of economic development, or it is rather a symptom of underdevelopment and a sector emerging in times of recession? The international experience is very diverse and large self-employment sectors are found in both developing and developed economies. It is not the size *per se* that matters for self-employment in transition at this stage but the structure, profitability and possible prospects to translate into enterprise development in the medium and long term.

The growth of self-employment at this stage can be seen as both a positive and a negative development. It is positive in that it provides an important source of subsistence for many households with basically no alternatives in the labour

market and because it may provide the base for a new private sector development in the long run. It is negative because it keeps valuable human resources in low value added and low productive activities with a 'de-skilling' effect and because it reduces the 'cue' to private employment contributing to undermine private sector development.

If the adjustment phase persists with the characteristics illustrated, contributions from state enterprises will continue to decline indefinitely. The private sector may expand up to the point where the private sector wage reaches the self-employment wage. When this occurs, private enterprises expansion remains exclusively linked to capital investments and technological upgrade constrained by poor access to credits. At one stage, the unemployment fund will run out of resources and unemployment benefits will be cancelled. As the reservation wage for self-employment disappears, self-employment will continue to expand becoming the largest employment sector in the economy. If this occurs, internal savings will disappear, the financial system dries up preventing any self-employed individual from investment and growth. This is the type of recessional dynamic that could explain the persistence of the adjustment phase and drive CIS economies towards a scenario of a developing type, with large sections of the population employed in informal, subsistence and illegal activities.

PART II – KAZAKHSTAN

CHAPTER 3

TRANSITIONAL REFORMS AND RECESSIONAL DYNAMICS

The aim of this chapter is to illustrate and explain the transitional reforms and the macroeconomic developments as they occurred in Kazakhstan between 1990 and 1996. Section 1 is a chronology of the reforms. Section 2 depicts macroeconomic developments in key areas of the economy and from a structural perspective. Section 3 discusses the causes of the output decline in the light of the specific literature on transitional economies. Section 5 summarises and concludes.

1. A brief chronology of economic reforms[1]

In this section we look at economic reforms. However, it should be kept in mind that these reforms occurred during a period when Kazakhstan, after having acquired independence as a nation-state for the first time in its history, found itself with the immense task of building the institutions of a modern state. From the writing of a constitution to the establishment of a parliament and a government, to important reforms such as the reform of the judiciary system, the army and the public administration, Kazakhstan was confronted with unprecedented institutional reforms in the course of rapid socio-economic changes. Institutional reforms were not completed before economic reforms but occurred in parallel. An elected parliament did not effectively start working until 1996 while important laws instrumental for economic reforms such as the law on bankruptcy did not become effective until 1997. Most economic reforms implemented during the period considered here have been managed by an elected president and a sequence of provisional governments.

[1] Reconstructing the chronology of reforms proved more complex that I initially thought. Republican records were either non-existent or difficult to access in Kazakhstan, especially for the early years. This section has been mainly constructed making use of a selection of IMF, WB, EU

It is useful to distinguish here three periods. The first period of reforms occurred before independence, under the Soviet Union (until the end of 1991). This is a turbulent period where Kazakh authorities had limited say in economic policies. The second period is between independence and the introduction of the national currency, the Tenge in November 1993 (1992-1993). This period has been characterised by the use of the Soviet ruble while economic policies were mostly being conducted at the national level. It is a period of high monetary instability and controversial reforms. The third period starts with the introduction of the national currency and ends with the end of the recession (1994-1996). It is a period when monetary control is finally achieved, transitional reforms are pushed through and the economic decline slowly comes to a halt.

1.1 Until 1991

During the soviet period international *trade* was the domain of state foreign trade organisations which executed the trade plan made of export and import targets. A 'price equalisation system' established trade taxes and subsidies insulating the domestic price structure from the world market. Prices served as accounting measure but did not reflect relative scarcity and did not act as proper incentives for a correct allocation of resources. Trade within the Council for Mutual Economic Assistance (CMEA) was conducted in a similar manner and cash flows were cleared through a system of bilateral agreements every year. The Soviet Union implicitly subsidised other CMEA members with adverse terms of trade as it was mainly an exporter of raw materials and importer of consumer and manufactured goods. Since the late eighties, enterprises in the manufacturing sector were allowed, after meeting the targets of the plan, to sell the residual output on the open market, and since April 1989, they were also allowed to engage directly in foreign trade bypassing the state owned foreign trade organisations.

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and EIU country reports (see bibliography). As each paragraph is the product of a comparative

Despite the introduction of these and other reforms between 1987 and 1989, in 1991, 70-80% of total output in Kazakhstan was still regulated by the state orders system, where production levels and flows of inputs and outputs were planned by the central authorities in Moscow. Nonetheless, the increasing autonomy granted to the republics meant that some republics applied reforms faster and deeper than others. This determined asymmetric price changes across republics which in turn created real price distortions in the union system of exchanges. Some of the republics, to protect themselves from such distortions, started to introduce controls and barriers to trade which began to disrupt the flow of inter-republican inputs and outputs. Barter exchanges emerged for strategic goods such as raw materials, energy supplies and basic consumer goods.

At independence, the Kazakh authorities replaced the union trade system with a national version which, however, functioned approximately in the same manner, with enterprises having to trade with state organisations at set prices and having to comply with delivery targets irrespective of whether payments were made or not. In 1991, only 8% of Kazakhstan's export and 14% of imports were to non-FSU countries. Kazakhstan trade relations took place for the quasi totality in the territory of the ex Soviet Union.

Some changes also occurred in the *financial system* before independence. Prior to the dissolution of the Soviet Union, the central bank of Kazakhstan was a branch of *Gosbank,* the Soviet state bank. Until the late eighties, the system allowed for monetary control thanks to sectoral projections derived from an input-output model. Cash was mainly used to pay salaries and subsidies while inter-enterprise payments were substantially nominal bank transfers. Credits were allocated for meeting production targets rather than distributed with financial criteria and firms' deposits into banks were earmarked for specific purposes.

In addition to the central bank, the system included two state-specialised commercial banks, one with the task of providing long-term investment credits

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exercise across sources, references in the text are limited to the strict necessary.

and the other in charge of foreign exchange operations. The state bank performed all commercial, clearing and settlements operations and private savings were held at the savings bank, a branch of the state bank. Towards the end of the eighties, a number of specialised banks were introduced to take over part of the commercial functions of the state bank. Also, enterprises and co-operatives were allowed to establish their own banks and, by the end of 1991, 72 banks existed in the Soviet Kazakh Republic alone. The great bulk of private savings remained into the state savings bank while monetary policies were still the prerogative of Soviet authorities.

Other pre-independence transitional reforms included initiatives in the fields of privatisation, price liberalisation and budget reforms. A first phase of *privatisation* was launched in January 1991 when the Kazakh State Property Committee was established to organise the sale of state property. The committee developed legislation on privatisation, the creation of new enterprises and joint stock companies. Privatisation started in August 1991 and by the end of the year 380 enterprises had been sold, mainly in the service sector and mainly to workers' collectives. The enterprise structure at the end of 1991 is shown in table 3.1.

Table 3.1 – Enterprise structure in 1991

	Size	No.of firms	%of firms	No.of workers (m)	%of workers	Av. w./firm
Small	1-199	27,500	74.3	1.0	16.7	36
Medium and large	200-4,999	8,000	21.6	2.9	48.3	363
Very large	5,000	200	0.5	1.6	26.7	8,000
Special (*)		1,300	3.5	0.5	8.3	385
Total		37,000	100	6	100	162

Source: EIU (1996); (*) Natural monopolies (water, power, heating, communications), non-commercial enterprises (social national security), non-renewable resource extracting enterprises (oil, gas, minerals, mining) and specified agricultural and forestry enterprises.

Price liberalisation was first launched in January and April 1991 with increases in administered prices and the abolition of controls over a set number of prices in non-strategic sectors. According to the IMF (1993), *"In April 1991, free or negotiated prices were introduced for some 15 percent of non agricultural consumer goods, 30 percent of heavy industrial goods, 20 percent of agricultural*

goods and about 70 percent of household services; most prices that remained under control were increased." (p.9).

Some initiatives were also taken in the field of *fiscal reforms*. During the late eighties the Kazakh republican budget was allowed to run substantial deficits reaching 10% of GDP in 1990. This was financed for the great part by union's transfers. Fiscal autonomy was granted to the Soviet republics already in 1990 and by 1991 Kazakhstan had its own separate budget from the Union. However, Russia still controlled the Ruble and in fear of a sudden rise in money demand a general budget deficit target of 3% of GDP was established for the ex-Republics in 1992. For many republics including Kazakhstan such target could not be met during the year because of cuts in bilateral transfers from Russia. Other main sources of revenues until then were individual and enterprise income taxes (about 44% of revenues) and a turnover tax (about 30%, IMF 1992b).

1.2 1992-1993

Independence was proclaimed on December 16th 1991. Three weeks later, in January 1992, *prices* for almost all goods were liberalised. Only 20% of goods included in the retail price index remained controlled but were increased several fold. During 1992, most of the remaining controlled consumer goods' prices were liberalised and, at the beginning of 1993, only energy, transportation, bread and bakery products and medicine prices remained regulated though, again, were increased several fold.[2]

The process of *privatisation* stepped up in 1992 when almost 6,000 small businesses were sold (IMF 1993). Most of the activities were sold to workers collectives, others were sold through direct tenders and the remaining became joint stock operations. Among the joint stock companies, the state generally maintained large shares. An estimated 4,000 privatised activities were engaged in trade, catering and consumer services and, of these, many were just assets such as

trucks and warehouses. In agriculture, several state farms were privatised and, by the end of 1992, a substantial output of potatoes, vegetables, fruit, berries, meat and milk (between 40 and 70% of total output depending on the product) was produced in the private sector. The first experimental phase of privatisation lasted until March 1993 with the beginning of the second phase (see next section). By the end of 1993, between 15% and 20% of all enterprises had been sold, mainly of very small size and counting for a small part of the workforce.

Bilateral *trade* agreements between Kazakhstan and the FSU were signed in 1992 specifying mutual supplies of industrial and consumer goods. These agreements still covered up to two thirds of all trade, and they were enforced by *Gosgakaz*, the state order system. The rest of trade was being carried out spontaneously by individual firms but it was still subject to quotas and licensing arrangements. The major trade reforms came with the abolishing of *Gosgakaz* in 1993 and its replacement with a system of state purchases according to 'state needs', *Gosnub*. This new system limited its intervention to strategic areas such as defence, health and education representing approximately 20% of output in 1993. Transactions became voluntary at negotiated prices and enterprises could hold deliveries upon payment. Later, bilateral trade agreement were renewed but limited in their scope. Also, the Ministry of Material Resources was re-converted into a new organisation called *Kazcontract*, a joint stock company partly owned by the state which became responsible for the implementation of interstate trade agreements and for purchases and deliveries in many sectors.

With independence, the former republican banks became the central banks for each of the new independent states. The basic Soviet *financial structure* was maintained until the introduction of the national currency in November 1993. The Central Bank of Kazakhstan (CBK) still obtained its funds from the Central Bank of Russia (CBR) and acted as a regional branch. However, important changes occurred. By the end of 1992, the CBK had responsibility for foreign reserves and for the establishment of the refinance rate, thus controlling in part monetary

[2] For a comprehensive treatment of price liberalisation see De Broeck., De Masi., and Koen (1995)

policies. Under the 1993 constitution, the central bank was made independent from the government and under the supervision of parliament. During this period, the number of banks continued to increase reaching 158 by the end of 1992, of which 11 were co-operative and 48 were private banks. By far, the largest bank remained the state savings bank and most of the new banks continued to obtain the majority of their funds from the CBK. The three largest commercial banks and the savings bank accounted for more than three-quarters of all assets in the system.

With one currency and 15 central banks introducing new regulations in an uncoordinated fashion during a hyperinflationary period, monetary control exercised from Moscow collapsed. The CBR attempted in 1992 to co-ordinate credit policies among central banks by introducing a system of correspondent accounts for each central bank. These bilateral accounts replaced the ex Soviet payments mechanism introducing some visibility in the inter-state financial flows. However, this changed the accounting procedures but not the payments practices conducted at the local level. A reform of the payments practises was attempted in April 1992. With the idea of stepping up monitoring, the number of financial transactions necessary to process a payment were increased. Rather than improving monitoring, this measure had the unwanted result of delaying further the processing of payments, introducing additional disruptions to the system. Inter-state credit arrears continued to increase during the period and in July 1992 the CBR was forced to re-centralise all operations in Moscow and to introduce inter-republican credit restrictions.

The new arrangement of the interstate payment system also collapsed during the second half of 1992. The Moscow office was soon overwhelmed by the amount of payments and queries to be dealt with. This factor, together with the multiplication of banks, the growing number of payments, errors in processing transactions, slow payments which relied on the inefficient postal system, small number of clearing and co-ordinating bodies, and fraud practices, brought the

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and IMF (1993)

payments system in dire straits. In early 1993, the CBR decided to make all further credits to the republics in the form of bilateral loans and in the space of a few months inter-republic payments through the correspondent accounts almost halted. Barter practises and inter-enterprises arrears started to grow dramatically during this period (IMF 1994c).

Despite the inability of Moscow to co-ordinate monetary policies across the NIS and maintain monetary discipline, many countries were hesitant about leaving the ruble area because of fears of Russia retaliating by cutting subsidies further. However, in July 1993 (with a two days notice) Russia de-monetised the pre-1993 ruble bank notes. Citizens were allowed to convert a limited amount of old rubles into new rubles within a two week period, and strict conditions were imposed to the ex republics for remaining in the ruble area. This forced most republics to abandon the ruble area and introduce their own currency. By December 1993, only Tajikistan continued to use pre-1993 rubles. Kazakhstan introduced its own currency, the tenge, in November 1993. Between July and November 1993, while the authorities were discussing the introduction of the new currency, pre-1993 rubles remained the legal tender in circulation. As this currency was no longer convertible in Russia, the country faced an inflow of old rubles from Russia and from other former Soviet Republics which introduced their own currencies before Kazakhstan. This anomaly put additional monetary pressure on the system and contributed in building up inflation during the period.

The *fiscal system* adopted by Kazakhstan at independence was similar to the previous Soviet system of fiscal federalism where there was a functional division of spending responsibilities and revenue sharing between the local and republican levels. First reforms in this area were launched together with the 1992 price liberalisation reforms and included the introduction of a value added tax. A budget law followed in June of the same year introducing taxes on individual properties but the management of these reforms proved difficult.

For instance, in 1992, four of the Oblasts were given 'free economic zone' status in that they could set their own fiscal regime and retain the revenues. It was hoped that the success of neighbouring China in this area could be replicated. However, these were relatively prosperous regions and in the absence of important sources of revenues the republican budget was clearly going to be unsustainable which *de facto* prevented the subsequent full application of such reforms. Also in 1992, a number of extra-budgetary funds such as the investment and privatisation funds were introduced with the aim of increasing transparency in expenditures. In reality, this move rendered the monitoring of expenses more difficult because of the lack of a treasury department while the monitoring of revenues was complicated by the fact that the tax inspectorate was independent from the ministry of finance. This latter problem was corrected towards the end of 1992 with the annexation of the tax inspectorate to the ministry of finance but the establishment of the treasury had to wait for a WB/IMF initiative well into 1995.

Despite these difficulties, reductions in corporate taxes first to 35% in January 1992 and later to 25% in June of the same year and increasing difficulties in tax collection, the government remained committed to containing budget deficits and managed to do so by cutting expenditures severely. The remaining deficit continued to be financed by credit arrears with Russia.

1.3 1994-1996

The second phase of *privatisation* consisted of a plan which included three sub-programs: A case by case privatisation which concerned large firms (more than 5,000 employees) to be mainly sold to foreign investors; a mass privatisation programme for medium enterprises (between 200 and 5,000 employees) to be sold by state auctions to the public; and a small-scale privatisation programme for the sell-off of small businesses (less than 200 employees) also to the public. This phase was expected to start in the second half of 1993 but took really off only in 1994.

This second stage of privatisation proved to be more successful than the earlier experiment in relation to small businesses. Post-sale performance surveys showed real improvements indicating an increase in employment, investments and in the variety of goods offered. This was a substantial improvement as compared to the earlier privatisation phase, where only one third of the privatised businesses were said to do better after privatisation (Baietti 1995).

The same could not be said for the 'mass privatisation' component. This targeted medium enterprises which were to be converted in joint stock companies with workers entitled to no more than 10% of the stocks. Citizens were given coupons to be exchanged for shares of Investment Privatisation Funds (IPF) and these funds were to bid for enterprises in privatisation auctions using the coupons as means of payment. For instance, between April 1994 and September 1995, 18 auctions were organised where blocks of shares were offered to the 169 privatisation funds existing at the time. During that period approximately 1,000 medium enterprises were privatised comprising about 400,000 employees. In a typical privatised enterprise 51% of shares were sold to a group of 5-10 investment funds, 39% were retained by the government and the rest was given to employees.

Firms with more than 5,000 employees were to be privatised on a case by case basis. These were usually large *kombinats* that often produced a small variety of products for very large markets guaranteed by the Soviet Union. The privatisation of these enterprises proved very problematic. Initially, only 38 enterprises were put on the market but the list was soon expanded to 180 with increased focus on the sale to private foreign investors. By the end of 1995, about 40 transactions were prepared though only five enterprises were actually sold. In June 1995, a special programme for the gas and oil sector was approved but this was soon overtaken by the introduction of foreign management contract practises where principally foreign firms were given the right to manage large state owned complexes for a limited time, usually five years. In return, the foreign companies

would receive bonuses or shares in profits. In October 1995, 27 firms were under management contracts and, of these, five were later cancelled.

Table 3.2 – Number of privatised enterprises

	1994	1995	1996	1997
Small-scale privatisation	2,748	2,477	3,393	5,590
Mass privatisation	n.a.	147	497	1,122
Privatisation in agriculture	918	513	138	18
Case by case privatisation	n.a.	5	28	47
Total	**4,147**	**3,142**	**4,056**	**6,777**

Source: EU (1998)

Land and natural resources remained state property but a privatisation programme for agriculture was launched to privatise non-agricultural assets. Assets' shares were transferred to farm workers together with inheritable land lease rights of up to 99 years. By the end of 1996, more than three-quarters of all state farms had been privatised in this manner. For agro-processing enterprises, after an unsuccessful attempt to transfer shares to insiders, this category was included in the small scale and mass privatisation programmes.

Housing privatisation was mostly left in the hands of local authorities and followed different patterns from place to place. Altogether, the process of privatisation reached 50-60% of its plan by the end of 1996. A third phase of the privatisation programme was under preparation in 1996 for the period 1996-1998 and substantial progress was made in 1997 (table 3.2).

Following the drastic changes occurred in the prices and trade regimes, it soon became obvious that *enterprise restructuring* was to be a crucial element of reforms. The process of privatisation allowed for greater autonomy but did not guarantee *per se* a qualitative amelioration of enterprises' performances. For small businesses, private ownership made a substantial difference in performance as it is witnessed by post-privatisation surveys. But for medium and large enterprises, which relied much more on the integrated Soviet production system, problems were substantial ranging from the disruption of inter-republican exchange

systems, to financial difficulties determined by a general scarcity of liquidity and credits, to loss of markets.

Moreover, the change in ownership from the state to a combination of insiders, investment funds, the state and occasionally private and foreign investors translated into little control rather than better management. Despite measures aimed at simplifying the ownership structure such as raising the ceilings of individual funds' maximum stake in any enterprise or allowing the funds to co-ordinate their acquisitions, complex ownership remained a major obstacle to restructuring. The lack of a clear ownership guidance and control left the old managers in total control of their enterprises. These managers not only lacked a proper understanding of market mechanisms, foreign markets and business strategies but they also found in their own enterprises a quick source of easy cash ready to be extracted through improper management of wages and subsidies, depletion of stocks or sales of equipment. Where old managers have been replaced with new ones this in effect facilitated this kind of mechanism as loyalty to workers no longer stood as an obstacle to improper management.

Concerning state firms, slow progress was made by the government in imposing financial discipline. By October 1993, the government prepared a list of 389 insolvent enterprises. For only eight of these liquidation procedures were established, while another group of fifteen was targeted for either restructuring or bankruptcy procedures. Also, in order to improve the management of state companies, state holding companies were formed in 1994. About 80 of these entities were created controlling about 2,000 enterprises. The holdings were expected to be in a better position than government bodies to monitor the activities and prepare restructuring plans. However, this experiment proved unsuccessful as these holdings replicated government attitudes and, by the end of 1995, 30 units had been already dismantled.

In September 1994, the government initiated an additional enterprise restructuring programme to deal with highly indebted enterprises selecting them for liquidation,

restructuring or rehabilitation. A rehabilitation bank was instituted in April 1995 by presidential decree with the purpose of taking control of selected enterprises facing major financial crisis. The idea was to take by the hand enterprises in difficulty and help them in adopting a restructuring plan. This was supported by financial assistance to be decreased throughout a certain period of time. Up to the end of 1995, the role of the bank had been marginal accounting for only a small fraction of non-performing enterprises. A restructuring agency under the ministry of economy was also instituted to deal with the liquidation of other state enterprises in financial distress but, at the end of 1996, little progress was visible on this front.

Further measures were introduced to liberalise foreign *trade*. In February 1995, licensing and quotas on exports and imports were abolished, except for a limited number of strategic commodities, and all state-owned foreign trade organisations (14 at the time) were de-monopolised. A system of contract registration was introduced and barter transactions, which became particularly intense in the previous two years, were banned. Nonetheless, tariffs and import and export duties remained a tool often used by the government at its discretion when deemed necessary and changes in this area occurred frequently between 1992 and 1996.

With the introduction of the local currency in November 1993, the Kazakh authorities became finally in full control of monetary policies. This allowed them to embark on an effective process of *stabilisation*. The new legal tender, the tenge, was left to float on the market with the central bank intervening on the foreign exchange market only when necessary. The value of the tenge which was initially introduced at 5 units per US dollar, devalued to reach 70 tenge per dollar by the end of 1996. In January 1994, the IMF approved a first stand-by agreement for Kazakhstan. The turbulent period 1992-1993, when monetary issues were beyond the control of the central authorities, was over and the IMF found itself in the position to negotiate with the government a number of stabilisation measures. Following a difficult first six months characterised by fast devaluation of the

tenge and an inter-enterprise arrears clearing operation, by the summer of 1994 tight credit policies were introduced. These had the almost immediate effect of reducing inflation, turning real interest rates positive and stabilising the exchange rate. The money-base targets established by the IMF were met and foreign reserves started to grow. Also, the balance of payments indicators were close to target despite a reduction in the overall trade flows.

Concerning the *financial system*, things started to ameliorate with the introduction of the national currency. In December 1993, ten of the NIS countries created an inter-state bank to deal with all payments and credit issues[3]. Some improvements were also achieved by allowing commercial banks to deal directly with cross-border transactions reducing substantially the delay in payments. Also, during 1994 and in the aftermath, a number of domestic clearinghouses emerged and payments systems were improved by the use of couriers and modern accounting practises. By then, however, inter-enterprises arrears had accumulated to dramatic levels. The 1994 clearing operation reduced inter-enterprises arrears substantially but, following the credit restrictions introduced with the stabilisation packages, arrears started to grow again and in 1997 they were still growing.

Banking legislation was also improved during this period. A law on the national bank of Kazakhstan was passed in April 1995 and a law on commercial banks was introduced in August 1995. Bank supervision and reserve requirements were strengthened between October 1994 and October 1995 inducing more than fifty of the 191 banks to close down. The banking system now includes a number of state-specialised banks, some medium size joint ventures banks, foreign banks and a large number of small commercial banks. A money market was introduced in April 1995, the Almaty Inter-bank Financial House, for short-term operations. Also payments system were improved in 1995 with the introduction of electronic information systems and a national clearing house. A stock exchange, the Central Asian Stock Exchange, also exists where transactions have been small though growing.

Budget revenues fell drastically in 1994 due to difficulties in tax collection, high tax exemptions, inter-enterprise arrears and appreciation of the real exchange rate which penalised exports. In response, the government tightened tax collection, introduced sales taxes on gasoline, increased rent payments by domestic oil producers and extended VAT coverage. Cuts were made to transfers and subsidies, infrastructure investments, operation and maintenance outlays and defence while some wage and social benefits payments were delayed. Thanks to these measures, and despite the adverse trend in revenues, the budget deficit from an estimated 16% in the first half of 1994 turned into a 4% surplus by the third quarter of the year. Budget deficits have been contained below the 3% target ever since.

[3] For an extensive analysis of monetary and exchange rates issues among NIS countries see IMF (1994c)

2. Macroeconomic developments[4]

2.1 The initial trade shock

The industrial structure inherited from the Soviet Union by Kazakhstan could not and did not stand alone as an integrated system of production. The system of industrial relations was one of the tools designed by Soviet authorities to foster internal stability. The higher the number of inter-republic exchanges the higher the dependency of each republic on the others and the lower the economic incentives to break apart from the Union. Thus, in order to produce a finished good such a car engine, several republics would be involved, providing raw materials, metals, the different components and eventually a market. Labour allocation was also organised on a similar principle. Workers in a car factory in Southern Siberia would be originally recruited from different republics while a newly trained civil servant could expect to be sent almost anywhere in the Union. Trade was also an important element of the control that the Soviet Union exercised over other Eastern European countries while the CMEA could maintain a certain isolation from the rest of the world economy also thanks to its internal self-reliant industrial structure.

At independence, Kazakhstan production capacity relied extensively on Soviet supplies of intermediate and finished goods as well as on markets for finished products. This is different from any other country relying on foreign trade for production. Kazakhstan producers knew and usually dealt with only one supplier per production input and transactions were planned and executed in Moscow.

[4] Data in this section should be treated with caution. There are several difficulties in estimating any figure for Kazakhstan between 1990 and 1996. Data for the period 1990-1992 is very scarce and the different sources used (CSAK, IMF, IBRD, EU, ADB, OECD) are consistently inconsistent. The accounting methods have been changing during the period particularly starting from 1994 with the introduction of the UN System of National Accounts (SNA). Hyperinflation makes it very difficult to adjust annual figures correctly. The unit of account changed in November 1993 from Ruble to Tenge and the exchange rate was arbitrarily set at 500 Ruble per Tenge. Such difficulties explain the significant differences in data offered by different sources. Most of the variance across sources seems to be explained by the deflators adopted. Perhaps the most reliable way of proceeding among these difficulties is to estimate figures in US dollars using the current exchange rate. This would not account for over and under-evaluation of the local currency but it allows to

Producers did not have to seek suppliers, bargain for prices or market their products to the same extent as a typical producer in a Western country would have to. With independence, transforming these industrial relations into trade relations was not a straightforward exercise. In this respect, *trade* data may provide the first insight into the production difficulties encountered by Kazakhstan with independence.

Table 3.3 shows World Bank trade estimates for Kazakhstan between 1990 and 1994. The decline in both exports and imports is very deep with exports declining almost four-folds and imports declining more than five-folds. The decline occurred almost entirely in inter-republican trade. This shifted the balance of trade from inter-republic to rest of the world trade. The most significant changes occurred in 1992, the first year of independence. In 1990, before independence, 89% of exports and 88% of imports were with other Soviet republics. Right after independence, at the end of 1992, only 59% of exports and 72% of imports were from inter-republic trade. Though the scale of the decline may be overestimated due to the over evaluation of the ruble in 1990 (data are estimated in USD using the official/commercial exchange rate), it is quite clear that inter-republican trade relations experienced a severe shock following the declaration of independence in December 1991. Overall trade volume (exports + imports) also deteriorated as a percentage of GDP passing from approximately 37% in 1990 to 25% in 1994[5]. Therefore trade reduced its contribution to production during the period despite trade liberalisation reforms.

anchor estimates to a stable measure and to have comparable numbers throughout the period. This was the method adopted when series had to be constructed.

[5] Calculated from CSAK (1997a), p.84

Table 3.3 – Foreign and inter-republican trade

USD (m.)	1990	1991	1992	1993	1994
Foreign trade					
Exports	1777	1183	1489	1529	1327
Imports	3250	2546	961	1269	1694
Inter-republican trade					
Exports	14310	14285	2141	3126	3213
Imports	24261	16949	2463	3576	3221
Total					
Exports	16087	15468	3630	4655	4540
Imports	27511	19495	3424	4845	4915

Source: IBRD (1995a); Million of current USD at official/commercial exchange rates

On the capital accounts side, Kazakhstan attracted significant *Foreign Direct Investments* (FDI), though concentrated in the oil and mineral sectors. Total FDI between 1993 and 1995 amounted to 1.5bn dollars of which at least half came from Chevron Co. alone. Oil reserves attracted all major multinationals which by means of joint ventures secured the research and exploitation of the richest oil fields in the country. However, oil production is for export and the pipelines which can take the oil to open sea and international markets are still under construction. Oil revenues declined during the period. The external outstanding *debt* stood at 25.3% of GDP in September 1995 (IMF 1996b) and it was mainly due to outstanding credits to Russia (42.6%), commercial banks (26.9%), the IMF (13.7%) and other multilateral institutions (10.1%).

2.2. The structure of the output decline

According to recent revisions made by different sources (IBRD 1997a and EU 1997), *output* declined by approximately 40% between 1990 and 1996. A first shock occurred in 1991 with an output decline estimated in between eight and nine percent. In 1992, output decline is apparently mild but this reflects a substantial increase in agricultural output due to an exceptional harvest while most other sectors experience the first significant losses. 1993 and 1994 are the worst years when all sectors including agriculture declined substantially while the recession slowed down in 1995 and stopped in 1996 (table 3.4).

The decline has been uneven across sectors. Only five sectors not particularly strategic for the Kazakh economy (housing, public utilities, personal services, finance and credit and general administration) showed improvements while all other sectors declined considerably. Six strategic sectors declined by more than 50% (industry, construction, transport, information and computer services, geology and science) with agriculture showing a comparable fall (-47%). The first sectors affected by the recession have been construction, transports and industry. These sectors declined sharply in 1992 and 1993 while most of the fall in most sectors occurred between 1991 and 1994. Agriculture declines irreversibly from 1992, irrespective of weather conditions. Generally speaking, the material and production spheres suffered the most as compared to public services such as health and education.

Table 3.4 - GDP volume indices by branch

	1990	1991	1992	1993	1994	1995	1996	*1990%*	*1996%*
Industry	100	100	83	72	52	47	48	*20.7*	*24.5*
Agriculture	100	77	100	93	73	55	53	*34.3*	*14.1*
Construction	100	89	53	39	33	20	16	*12.1*	*5.1*
Transport	100	94	76	64	46	40	41	*8.7*	*11.2*
Communication	100	100	93	89	89	85	84	*0.8*	*1.9*
Trade	100	99	82	76	63	67	77	*8.2*	*20.0*
Inform. and Computer services	100	93	66	47	39	32	20	*0.2*	*0.1*
Geology	100	102	65	54	45	39	33	*0.9*	*0.5*
Housing	100	102	104	104	106	105	105	*1.7*	*4.4*
Public utilities	100	103	104	99	95	107	104	*1.6*	*5.1*
Personal Services	100	100	102	97	93	94	109	*0.8*	*0.5*
Health care	100	96	100	95	89	86	85	*2.2*	*2.9*
Physical culture	100	96	100	95	90	84	78	*0.0*	*0.0*
Social security	100	95	99	94	99	101	95	*0.1*	*0.1*
Education	100	104	102	99	94	93	90	*4.3*	*4.9*
Culture	100	98	84	80	70	69	61	*0.7*	*0.5*
Science	100	95	80	70	35	34	29	*0.7*	*0.4*
Finance and credit	100	107	117	134	125	121	110	*1.0*	*1.3*
General administration	100	113	125	130	143	144	145	*1.0*	*2.6*
Total	**100**	**91**	**88**	**79**	**65**	**60**	**61**	*100.0*	*100.0*

Source: CSAK (1997a) and IBRD (1997a). Note that sectors' shares have been calculated at current prices.

As a consequence of the asymmetric decline, the sectoral composition of output changed. In 1990, agriculture contributed for more than one third of output while by 1996 this share collapsed to a mere 14%. Construction also lost heavily in

relative terms reducing its contribution to output by more than half. Industry and transport gained in relative terms as well as most of non-material sectors. The first six sectors listed (industry, agriculture, construction, transport, communications and trade) contributed to almost 85% of GDP in 1990 and about 77% in 1996. The shift is therefore from material to non-material sectors and from agriculture and construction to industry, transport and trade.

Within industry, the decline in production affected virtually every sector with very few exceptions but the decline has been very uneven across industrial sectors. Table 3.5 shows output for the most important industrial commodities. The decline in industry occurred most notably from 1991 onwards and light industry and food production are affected first. The cumulated decline of these two sectors shows exceptional losses. It is evident that losses at the top of the industrial production chain (extraction and raw materials by-products) have been much less severe than losses at the bottom end (clothing and other consumer goods). There is also a visible progression moving down the production line. Metals and fuels declined more than raw materials while clothing and 'white goods' almost disappeared from the production map. Food production (commercialised through official channels) declined by 70%.

Table 3.5 - Volume indices for major industrial products

	1990	1991	1992	1993	1994	1995	1996
Extraction (total)	**100**	**99**	**96**	**85**	**79**	**63**	**58**
Brown coal	100	114	121	136	139	107	104
Crude petroleum	100	102	101	90	86	83	97
Iron ore	100	92	74	55	44	63	55
Natural gas	100	111	114	94	63	83	90
Raw mat. by-products (average)	**100**	**96**	**89**	**71**	**49**	**48**	**48**
Building material, cement	100	91	78	48	24	21	13
Cast iron	100	95	89	68	47	50	49
Rental black metal	100	95	89	70	47	43	46
Steel	100	94	90	67	44	45	48
Benzine	100	102	97	83	59	63	65
Diesel fuel	100	101	91	87	70	66	67
Food (average)	**100**	**97**	**69**	**54**	**44**	**34**	**30**
Meat	100	94	70	61	46	30	19
Milk products	100	95	73	46	34	23	14
Butter	100	89	73	79	58	35	19
Cheese	100	94	66	63	51	34	23
Wine	100	119	72	36	20	14	13
Oil	100	106	62	46	45	45	43
Flour	100	103	100	98	98	77	78
Sugar	100	96	67	35	28	34	37
Non-alcoholic beverages	100	79	36	27	20	11	25
Clothing (average)	**100**	**91**	**74**	**59**	**32**	**9**	**8**
Cotton yarn	100	100	98	88	50	10	8
Woven cotton fabrics	100	89	89	90	56	14	14
Woven woollen fabrics	100	91	68	59	29	9	6
Woven silk fabrics	100	83	66	20	6	6	4
Shoes	100	93	50	40	19	5	n.a.
Other consumers goods (average)	**100**	**94**	**89**	**87**	**29**	**8**	**4**
Washing machines	100	106	101	69	24	13	n.a.
Radio sets	100	116	130	97	5	0	n.a.
Tape recorders	100	65	57	62	57	11	n.a.
Paper	100	68	46	140	48	12	4
Tires	100	115	109	68	10	3	4

Source: Constructed from CSAK (1997b) and De Broeck and Kostial (1998)

Agriculture was initially the largest sector in the economy but following an overall decline of almost 50%, the sector fell behind industry and even trade by 1996. According to De Broeck and Kostial (1998) such decline was due mainly to significant terms of trade losses: *"(...) prices in agriculture as measured by the sector's implicit GDP price deflators, increased by only half as much as those in other sectors. According to World Bank estimates, in 1993, the prices of inputs used in agriculture increased by 18.8 times while output prices increased by 7.8 times"* (p.41). This divergence no longer persisted after 1994 (CSAK 1997a), but it contributes to explain agricultural losses up until then. Cuts in subsidies

throughout the period and the accumulation of credit arrears determined a reduction in further lending leaving the sector with severe shortages in agricultural inputs and little chance to invest in compelling technological upgrade. As a consequence, productivity as measured by output per hectare continued to decline for most products throughout the period (De Broeck and Kostial 1998, p.46).

The overall fall in output slowed down considerably from the second semester of 1994 onwards but intermediate sectors such as light industry and manufacturing continued to decline visibly after 1994, the period we referred to as the 'adjustment' phase. This can be better observed from the input-output tables by sector of activity[6]. Table 3.6 was assembled making use of the 1994 and 1996 intermediate consumption matrixes[7]. After having deflated 1996 values with producers prices indexes, the difference in values between 1994 and 1996 were calculated. For clarity, only the signs of the real changes are reported in the table. Therefore '-' signs indicate a decrease in activity between 1994 and 1996 and '+' signs indicate an increase. The '0' values show that there have been no exchanges between sectors during the period. The table has been divided in four main areas, heavy and light industry and consumers and public services. The categorisation does not reflect any international practice but it helps to reflect on the structural changes that occurred.

The sectors the most inter-related with the rest of the economy are those where very few zeroes are present; that is the top left hand corner of the table, the heavy and light industry sectors. Almost all cells in these areas show negative signs with few exceptions represented by electricity, oil and gas, food products and

[6] These tables were compiled during the Soviet times for planning purposes and Leontief made them popular in the West by making an adaptation to the US economy. Recently, the tables have been revised to make them compatible with the 1993 UN System of National Accounts (SNA).

[7] Prof. Ferrari of the University of Florence attracted my attention to these tables and provided the 1995 and part of the 1994 sets of data. Ms. Moldakulova of the Kazakh State Management Academy in Almaty arranged for the complete sets of 1994 and 1996 tables to reach me. Ms. Kairova of the Committee for Statistical Analysis provided the data. I am grateful to all of them for their help. Ferrari (1997) made use of the 1994 and 1995 tables to assess the Kazakh economy. In effect these tables are the only valuable tools to evaluate the structure of the recession. Unfortunately, pre-1994 tables were not available.

communications. Basically inter-industrial relations in these strategic areas have been mostly declining during the adjustment phase. Consumers and public services sectors are much less integrated, especially within each category. This reflects the nature of these sectors which are directly reliant on final demand. Here the general picture is more positive with reprisal of activities in many areas. The group of sectors that show negative signs almost across the board is light industry which is also the group of sectors which has the least number of zeroes. In other words, the group of industries the most interrelated with the rest of the economy is also the group of industries that was still visibly declining between 1994 and 1996.

Thus, the overall deceleration of the output decline during the adjustment phase reflects in fact a shift of activities from industrial manufacturing towards final services. Given that oil and gas are and will be supported in the future as a priority area, the economy has been in fact polarising towards the two tail ends of the economic structure, raw materials on the one hand and final services consumption on the other. This means that increases in output of less integrated sectors such as consumers' services have little 'multiplicatory' impact on the whole economy. Conversely, further declines in strategic areas such as light manufacturing have large multiplicatory effects on the rest of the economy. As a consequence, the transition from the 'adjustment' to the 'recovery' phase and in particular the speed of such transition will very much depend from whether this 'polarisation' trend will continue to occur or not.

Table 3.6 - Intermediate consumption matrix (1994-1996 changes at 1994 producer prices)

	Heavy industry						Light industry							Consumers services					Public services					
	Elec	Oil	Coal	Ferr.	Nfm	Ch&	Ma	Timber	Building	Textile	Food	Constr	Agricult	Transport	Com	Credit	Trade	Inf. &T	Housing	Educat.	Health	Culture	Science	**Tot.**
Electricity	-	-	-	-	-	-	-	+	-	-	-	+	-	-	-	-	+	-	-	-	+	+	-	-
Oil and gas	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	-	+	-	+	+	+	-	-
Coal	-	0	-	-	-	-	-	-	0	-	-	-	+	-	+	-	+	0	+	-	+	-	-	-
Ferrous metals	+	+	-	-	-	+	+	-	+	-	-	-	-	-	+	-	+	0	+	0	0	0	-	-
Non ferrous metals	+	0	-	-	-	+	+	+	-	-	-	+	-	-	+	-	+	+	+	0	0	0	-	-
Chemicals and petrochemicals	+	+	-	-	-	+	-	-	-	-	-	-	-	-	+	-	+	+	+	0	+	0	-	-
Machinery	+	+	-	-	-	-	-	+	-	-	-	-	-	-	+	-	+	+	+	+	+	+	-	-
Timber processing, pulp and paper	+	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	+	+	0	+	0	0	-
Building and construction material	+	-	-	-	+	-	-	-	+	-	-	-	-	-	+	-	-	0	-	-	-	+	-	-
Textile and clothing	-	+	-	-	+	+	-	-	-	-	-	-	-	-	+	-	-	0	-	0	+	+	0	-
Food products	+	+	-	+	+	+	+	+	+	-	-	-	-	-	0	-	-	0	+	-	+	+	+	-
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Agriculture and Forestry	0	-	0	0	0	-	-	-	0	-	-	+	-	-	0	0	+	0	+	+	-	0	0	-
Transportation	-	-	-	-	-	-	-	-	-	-	-	-	-	0	+	0	+	0	+	0	0	+	0	-
Communications	-	-	+	-	+	-	-	-	-	-	-	-	-	-	+	+	-	+	+	+	+	-	+	+
Credit, finance, gen. admin. and soc. org.	-	-	-	-	-	-	-	-	-	-	-	+	-	+	-	-	+	-	+	-	-	-	-	-
Trade and catering	0	-	+	+	+	-	-	-	-	-	-	0	+	+	0	0	+	0	+	0	+	0	0	-
Information and computer services	-	-	-	0	-	0	-	0	-	0	0	-	-	+	+	+	0	+	-	0	0	0	0	-
Housing services and communal services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	0	+	+	+	+	+	-	+
Education	-	-	-	-	-	0	-	0	0	0	-	-	-	+	-	+	0	+	+	+	0	0	0	+
Health care, phys. culture and soc. sec.	-	-	-	-	-	-	-	0	0	0	-	0	0	0	0	0	0	0	0	0	+	+	0	+
Culture and arts	-	-	-	-	-	0	-	0	-	0	-	0	0	0	0	0	0	0	0	0	0	0	0	-
Science	-	-	-	-	-	-	-	-	-	-	-	-	-	0	+	0	0	0	0	0	0	0	0	-
Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	+	+	+	+	+	+	-	-

Source: CSAK (1995a and 1998a)

2.3 Prices and wages

Following the price and trade liberalisation measures starting from January 1992, *inflation* boomed partly because of a large overhanging inflation and shortages of goods and partly because of lack of monetary discipline. Only after the introduction of stabilisation measures in 1994, inflation growth gradually declined (chart 3.1).

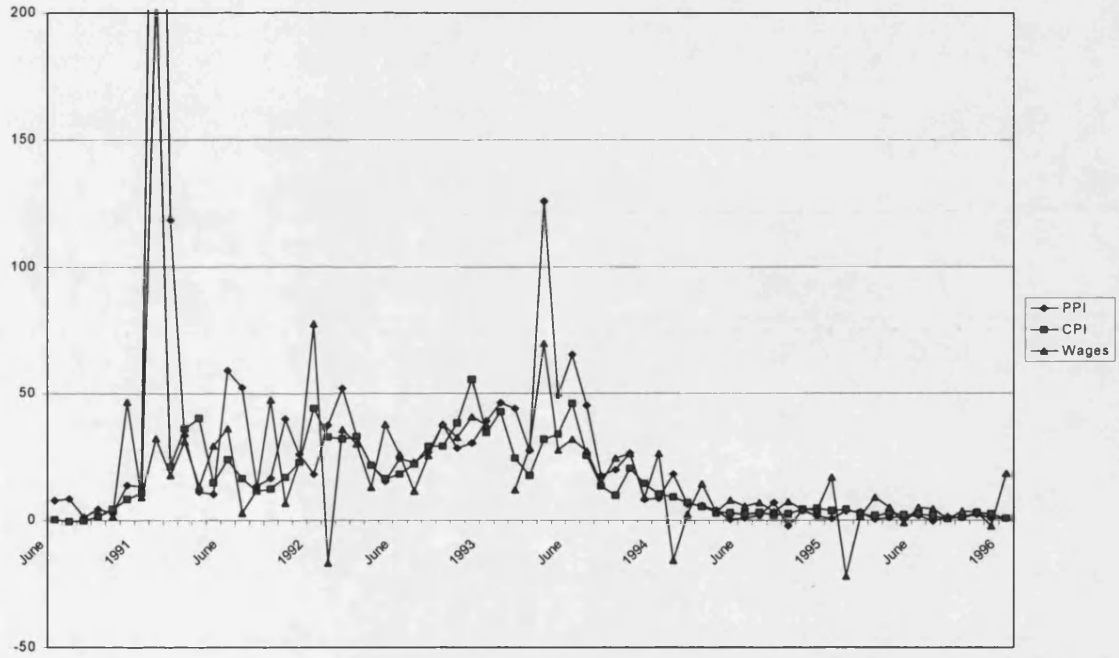
The two major inflation peaks are associated with price liberalisation implemented in April 1991 and in January 1992. Between January 1992 and July 1993 we observe a period of instability when we explained that the central bank of Russia had difficulty in co-ordinating monetary policies of the ex republics and a certain monetary relaxation was in place. The period of accelerating inflation between July and November 1993 coincides with the period when pre-1993 rubles were flowing into Kazakhstan from other republics where the tender was no longer valid. After the introduction of the Tenge in November 1993, the currency depreciated quickly contributing to a new price increase. Tight monetary policies introduced in January and February 1994 slowed down inflation but between March and May, in an effort to clear inter-enterprises arrears, a large quantity of credits was injected into the system and inflation accelerated again. Finally, from the summer of 1994, tight monetary policies induced a deceleration of inflation to one-digit levels.

Producer prices have increased generally faster than consumer prices[8], especially in critical times such as during price liberalisation. This is partly due to policies aimed at protecting consumers and primary consumers products and partly to the fact that many of the locally produced consumers products have been substituted by cheap imports while supply of intermediate goods remained constrained by credit restrictions, trade and payments difficulties.

[8] By producer prices I mean input prices for industrial producers.

This producer-consumer prices constituted an additional pressure on industrial producers who could no longer transfer the increase in prices onto consumers, experiencing an additional squeeze in profits. Therefore, the increase in producers' prices has been partly transmitted onto workers (by containing real wages growth) and partly has been bore by enterprises. This is also the opposite of what has been found for Poland and Czechoslovakia in the early years of transition where consumer prices rose faster than producer prices (Basu, Estrin and Svejnar 1997, p. 272).

Chart 3.1 – Monthly percentage changes in prices and wages 1991-1996



Source: Calculated from EU (1996), IMF (1993) and De Broeck and Kostial (1998). 1993 nominal wages are estimates. 'Wages' are the workers' monthly earnings as reported by enterprises.

The chart also shows that nominal wages have increased less than consumers' prices. The difference between the two measures represents the loss in real wages during the period. Nominal wages show significant swings explained by monthly variations but it is evident that during inflation peaks wages did not adjust, leaving real wages significantly reduced each time such peaks occurred. After 1994, when inflation decelerated, nominal wages showed faster growth than both consumer and production prices.

This suggests that expectations have played a very significant role in determining wage adjustments. When inflation was growing at high-speed wages adjusted very slowly, when inflation was decelerating after a long hyperinflationary exposure wages were growing faster than inflation. The fall in real wages may also be explained by the fact that many enterprises entered the transition process already with excess of labour. With the consequent output fall and the general reluctance in shedding labour in the early years, inflation may have simply corrected the price of artificially high wages moving towards equilibrium.

Real wages decline has been nonetheless exceptional and did not occur evenly across sectors. Table 3.7 shows monthly average wages in USD equivalent and according to administrative sources. The early data should be treated with caution, particularly 1990, because the exchange rate adopted was what the Soviet authorities deemed correct at the time and does not reflect street value. However, a sharp decline in wages is evident and again very acute between 1991 and 1993. It is noticeable that the fall in real wages does not seem to follow the same pattern across sectors as the fall in output. Two sectors that performed rather badly such as industry and construction maintained relatively high wages while trade and catering which did relatively well did not close the original 1990 wage gap with other sectors. This is a theme that will be explored when we will be looking at the reallocation of labour across sectors in chapter 4.

Table 3.7 - Monthly average wages (USD equivalent) and prices

	1990	1991	1992	1993	1994	1995	1996
Economy average	**442**	**245**	**30**	**22**	**32**	**75**	**94**
Material sphere	*478*	*259*	*33*	*24*	*37*	*84*	*102*
Industry	493	297	39	29	52	122	144
Construction	550	298	37	29	50	123	130
Agriculture	487	230	31	17	19	37	49
Transport	505	274	37	31	45	106	132
Communications	380	216	24	21	34	92	123
Trade and catering	338	186	18	15	22	52	62
Non-material sphere	*338*	*198*	*18*	*16*	*22*	*55*	*76*
Housing and public utilities	332	187	21	18	31	71	94
Education	303	177	16	14	17	46	69
Culture and Art	272	160	13	12	14	36	54
Science and scientific services	533	264	29	21	27	70	91
Health, physical culture and social insurance	297	196	14	11	15	42	62
Credit and insurance	590	413	53	50	78	171	180
General administration	558	263	30	24	33	70	98
Consumer prices (end year, annual changes)		**137**	**2984**	**2169**	**1160**	**60.4**	**28.6**

Source: Calculated from CSAK (1997b) and IMF (1993)

2.4. Consumption and investments

From the production side, the general economic decline moved through wages to households. The compilation of GDP by final use (table 3.8) informs us about public and private consumption and investment. *Households' consumption* declined by half during the period while government expenditure declined significantly but only in relation to the item 'individual' (transfers to households and enterprises). Both households' consumption and government transfers to households and enterprises declined seriously starting from 1993 and experienced the worse decline between 1993 and 1995. Therefore, the decline in consumption (demand for goods and services) comes with approximately a two years delay vis-à-vis the first output decline. When this occurs, households are affected simultaneously by falls in consumption, government transfers and services provided by non-profit institutions.

As noted by Easterly and Fischer (1994) and as will be illustrated further, Soviet growth relied extensively on investments. With substantial labour hoarding within factories and slow technological development in most sectors, increases in productivity were a serious concern of Soviet authorities. In Kazakhstan, investments were mainly financed in the form of transfers from the Union budget and, not surprisingly, with independence these types of transfers were cut first. *Gross Fixed Capital Investments* declined by almost 80% between 1990 and 1996, twice as much as output. The decline occurred from the start with a 40% loss evident already in 1992. Large investment falls occurred in agriculture, construction, trade and catering while transport and communication decline was contained. In relative terms, this meant a gain of industry, transport and communication vis-à-vis other sectors. Within industry, the oil and gas and coal sectors alone represented in 1995 more than 50% of all investments in industry, the rest being for the quasi totality in metallurgy and electric power generation. Therefore the relative gain in industry reflects a gain in the energy sector and a loss in manufacturing. This means that manufacturing, other than the initial adverse shock generated by trade, suffered from a lack of investments throughout the transition.

Table 3.8 – Consumption and investments

	1990	1991	1992	1993	1994	1995	1996
Final consumption expend. (Total)	100	96.8	96.1	84.4	67.2	54.9	54.6
Households	100	96.8	96.1	86.6	64.9	51	52.7
Government	100	104.8	106.5	81.2	81.8	69.4	69.4
Individual	100	102.4	98.4	73.6	64.9	81.4	66.3
Collective	100	111	132	102.7	120.7	119.4	108.5
Non-profit instit. serving households	100	69.4	61.7	55.3	49.8	21.5	13.1
Gross capital formation	100	56.1	54.6	36.1	43.2	32.2	19.2
of which: Gross fixed capital invest.	100	74.2	61.9	61.6	48.6	34.7	21.6

Source: CSAK (1997a)

2.5. The government budget

With the process of privatisation under way, the economic decline and consequent fall in *budget* revenues, the government weight in the economy diminished considerably (table 3.9). Both revenues and expenditures declined substantially

and the ability of the government has been to maintain small budget deficits in spite of the drastic decline in tax revenues and transfers from Russia (grants). Only in 1991 and 1992 was the budget deficit above target. The price of such stability has been a severe cut in expenditures. This concentrated on transfers' cuts to households and enterprises and on a reduction in investments, while current expenditures such as salaries of public employees remained relatively high. The figures in table 3.9 are the more worrying given that they are in percentage of GDP, which we said declined by 40%.

Table 3.9 - The State Budget (% of GDP)*

	1990	1991	1992	1993	1994	1995	1996
Total revenues and grants	**32.7**	**25.0**	**24.1**	**24.4**	**18.0**	**17.9**	**16.2**
Total revenues	22.8	20.5	22.4	24.4	18.0	17.9	n.a.
Current revenues	22.8	20.5	22.4	21.5	17.7	17.2	n.a.
Tax revenues	21.9	18.9	21.5	17.1	12.0	10.4	n.a.
Non-Tax revenues	0.8	1.7	0.9	4.4	5.7	6.8	n.a.
Capital revenues	0.0	0.0	0.0	2.9	0.3	0.7	n.a.
Grants	9.9	4.5	1.7	0.0	0.0	0.0	n.a.
Total expenditure	**31.4**	**32.9**	**31.4**	**25.2**	**20.5**	**20.3**	**18.6**
Current expenditure	n.a.	n.a.	24.7	20.1	14.9	17.7	n.a.
Consumption	n.a.	n.a.	17.5	17.5	11.3	13.7	n.a.
Interest payments	n.a.	n.a.	2.2	0.1	1.7	0.2	n.a.
Transfers to households	n.a.	n.a.	3.0	1.1	0.7	0.8	n.a.
Other transfers and subsisdies	n.a.	n.a.	1.9	1.4	1.3	2.5	n.a.
Capital expenditure	n.a.	n.a.	6.7	5.1	5.6	2.6	n.a.

Source: IBRD (1996b), IMF (1993); (*) It does not include extra-budgetary funds

The stages of the output decline should now be fairly clear. Sectors heavily dependent on trade and Soviet transfers declined first. Construction is the first sector to fall because it depended almost exclusively on investments determined by the central plan and accounted for in government spending. These were the first cuts in public investment to occur in 1990 and 1991 and building projects had to be stopped almost immediately. Transport also declined at an early stage partly for the general slowdown in trade which occurred between 1990 and 1992 and partly for sharp increases in fuel prices following the January 1992 price liberalisation. The second shock occurs in manufacturing around 1992-1993 during the post-independence trade fall, when the hyperinflationary peaks in production prices were particularly severe. From 1993 onwards, the recession

expands to the demand side in the form of public and private consumption declines.

During this process, the economy has compartmentalised, polarising around the energy sector on the one side and public and consumers' services on the other side. The production multiplier effect generally supported by manufacturing progressively vanished compromising the capacity of the economy to 'bounce back'. The fall in production turned into a substantial fall in government revenues with further cuts to expenditures on households and investments reducing the overall government role in the economy and households reliance on the state.

3. Explaining the recession

Several aspects concerning the causes of the output decline should be self-evident by now. Nevertheless, the causes of the output decline in transitional economies have been one of the most controversial issues in the transition literature. The size of the output decline in concomitance with transitional reforms made these same reforms an easy target for critique, especially from those who rejected a radical approach to structural changes. And as a reaction to such critiques, alternative paradigms have been developed either supporting the idea that reforms have not been successful only where they have not been implemented properly or shifting the attention to arguments other than transitional reforms.

Popular themes emerged from this debate have been the 'statistical artefact' hypothesis, the speed, timing and sequencing of reforms, the 'soft budget' constraint hypothesis, the role of the initial structural conditions, various supply and demand shocks hypotheses, the 'misallocation of resources' hypothesis, the 'credit crunch' and the 'disorganisation' hypotheses. Here, some of these hypotheses will be discussed in relation to the Kazakhstan experience.

3.1 The statistical artefact hypothesis

Several authors argued that the size of output in Soviet times was overestimated either because of over-reporting on the part of the statistical offices determined by political pressure or because of over-reporting on the part of enterprises keen to show good results and the achievement of planned targets. With the beginning of the process of transition and the growth of the private and informal sectors it has been argued that accountability and coverage diminished reducing artificially the size of output reported in official publications (Winiecki 1991, Berg and Sachs 1992, Easterly and Fischer 1994).

These arguments have been contested on several grounds. For Poland, Nuti and Portes (1993) argued that the shadow economy may have been large already in the pre-1989 period, thus understating and not overstating pre-transition output. Also, enterprise over-reporting in countries such as Poland (since 1982) and Hungary (since 1968) where enterprises were free to set their output targets may not be a sustainable argument according to Rosati (1994). Balcerowics (1995) suggested that enterprises may have been encouraged to hide production capacity and stocks in order to negotiate lower output targets with the central authorities, thus underestimating pre-transition production.

As far as Kazakhstan is concerned, several arguments and recent evidence suggest that the statistical artefact hypothesis should be rejected. The IBRD (1997a) and the European Union (EU 1997) carried out independently and at different times revisions of the national accounts and of the output decline in Kazakhstan using different methodologies. The two sources come to very similar conclusions supporting the general estimate that output declined by approximately 40% between 1990 and 1996.

If we are sceptical about national accounts, we can follow Kaufmann and Kaliberda's (1996) suggestion and use electricity consumption data as a proxy for output (table 3.10). Electricity consumption shows a smaller decline as compared

to output by approximately 10 percentage points (30% as opposed to 40%). This is no small decline and it should not be underestimated the fact that many large enterprises involved in the transformation of metals use machinery (high temperature ovens for instance) which cannot be shut unless the firm decides to stop production altogether. These firms continue to use large quantities of electricity even if they are not producing at all. Moreover, household consumption remains high given that electricity provision cannot be physically interrupted to households who do not pay their bills, as electricity meters were not yet in use during the period considered.

Table 3.10 - Electricity use

	1990	1991	1992	1993	1994	1995
Total	**100**	**97**	**92.6**	**85.2**	**75.8**	**70.2**
Industry	100	94.2	85.4	72.8	59	57.7
Agriculture	100	102.9	110.2	119.7	116.1	90.5
Construction	100	100	86.4	72.7	63.6	63.6
Transport and Communication	100	96.9	87.7	76.9	67.7	58.5

Source: De Broeck and Kostial (1998)

A different but equally interesting measure of activity is freight traffic. Table 3.11 shows that the decline in total freight traffic recorded in Kazakhstan declined far more than output. The sole exception is air traffic but in 1996 it counted for only 0.1% of total transport. In this case, an under reporting argument is difficult to sustain as most transport is by railways which is still state owned. An underreporting argument for motor freight traffic is also difficult to defend given the decline in tires' production shown in table 3.5.

Other arguments such as the one that privatisation determined a growth of under recording of production are weak for Kazakhstan because the process of privatisation took really off only after 1994 when most of the output decline already occurred. If anything, there may have been an under recording of output in 1995 and 1996 for which, however, we have no evidence. Therefore we shall conclude that the extent of the output decline is credible and not artificially inducted.

Table 3.11 - Freight Traffic (Millions-net tons/Km)

	1990	1991	1992	1993	1994	1995	1996	*% in 1990*	*% in 1996*
Railway	100	92.0	70.3	47.2	36.1	30.6	27.7	*94.8*	*98.3*
Air	100	83.8	78.8	82.5	108.8	172.5	171.3	*0.0*	*0.1*
Motor	100	96.8	79.3	53.9	20.8	11.2	7.5	*4.3*	*1.2*
River	100	89.0	65.5	40.1	21.2	20.8	11.5	*0.9*	*0.4*
Total	**100**	**92.1**	**70.7**	**47.5**	**35.3**	**29.7**	**26.7**	***100.0***	***100.0***

Source: CSAK (1997b)

3.2. The pre-transition conditions

Pre-transition conditions and in particular the structure of production and ownership may well have played a role on the profile transition took in FSU countries. It is instructive in this case to look at China. China benefited early on from a substantial increase in productivity in agriculture because reforms initiated by encouraging production in this sector and because households responded well to incentives as they controlled their means of production. Only 18% of employment was in state owned entities in 1978 as opposed to 60-90% in the republics of the Soviet Union (Cis-Stat 1998 and China Statistical Yearbook 1995). This liberated from agriculture a mass of workers who became instrumental in subsequent reforms in the manufacturing and industrial sectors developed with Towns and Villages Enterprises (TVEs). These pre-conditions were simply not present in some CEE and all FSU economies where even agriculture was managed in an industrial fashion with large kolkhoz and cooperatives. Also, China in 1978 was for the quasi-totality an agricultural economy and it was much less dependent on world trade than CEE and CIS economies on CMEA or on the Soviet Union. Therefore, the country was less vulnerable to trade shocks and more likely to enjoy high productivity growth in the newly established industrial sector.

A comparison with CEE economies also underlines the importance of pre-transition conditions. CEE economies which performed better such as Hungary and Poland dismantled central planning mechanisms years before the introduction of price and trade liberalisation in 1990 while CIS countries maintained the

system well into 1992, more than a year after the first price and trade reforms. The share of the private sector in CEE countries was generally larger than in CIS countries in 1989 and this factor alone must have affected responses to price and trade liberalisation. Distances from alternative markets such as western Europe, which imply differentials in transport and transaction costs, may have been an additional factor in explaining the different extent of the recessions in CEE and CIS countries. CEE industrial producers found in Western Europe both alternative sources of intermediate supplies and alternative markets for intermediate and finished products. This would also explain why the Baltic States performed generally better than the rest of the Soviet republics. Estonia, for instance, owes its success to the trade and aid relations established with Finland. The country, together with Latvia and Lithuania has access to the Baltic Sea, a vital trade route for Scandinavian countries, Germany, Poland and Russia. These are also very small countries where the successful development of one or two sectors can lead to substantial improvements in total output.

The initial macroeconomic conditions of Kazakhstan were also an important factor in explaining the vulnerability of the economy, to trade shocks in particular. The republic relied heavily on budget transfers from Russia to support investments in extraction and heavy industry and benefited from terms of trade privileges for many commodities, including agricultural products. We saw in table 3.9 that in 1990 almost 10% of budget revenues were still in the form of transfers from Russia while according to De Broeck and Kostial (1998) Kazakhstan imported from other republics more than 25% of its domestic consumption and exported more than 25% of its production of key commodities. Moreover, the geographical industrial layout of heavy industry made sense in a Soviet context but not in Kazakhstan alone. Even if extraction was a very large sector and the first export item, large quantities of raw materials were imported from Russia. In 1996, fuel and oil products and ferrous metals and products still represented the major items for both exports and imports. This is due to the geographical location of mine and oil fields and the respective processing plants. Kazakhstan refineries in the East of the country were not connected with the oil fields in the West so

that oil from the West went to Russian refineries while the refineries in the East were supplied by Russian oil. Similar problems existed with some metals and the respective processing industries.

Kazakhstan also entered the process of transition with excess capacity in terms of both labour and capital. This was an aspect common to the Soviet republics but the Central Asian republics were known to lag behind other republics in this respect. The Kazakhstan growth rate of Net Material Product (NMP) per worker and Total Factor Productivity (TFP) between 1970 and 1990 were 0.7% and – 1.1% respectively, the second lowest figures after Turkmenistan among Soviet republics (Easterly and Fischer 1994, p.44).

The excessive reliance on extensive growth is most evident looking at the computation of TFP. Starting from Easterly and Fischer data, De Broeck and Kostial (1998) re-estimated TFP for Kazakhstan in five strategic sectors and for the period 1970-1995 as follows:

$$\ln\left[\frac{Y_t}{Y_{t-1}}\right] = \theta_k \ln\left[\frac{K_t}{K_{t-1}}\right] + \theta_l \ln\left[\frac{L_t}{L_{t-1}}\right] + TFP_{t-1,t}$$

With Y=output (NMP), K=capital, L=Labour, θ= Average income share of factor i in total factor payment. $\theta_k + \theta_l = 1$

TFP is a measure of the amount by which (the log) of output would have increased had all inputs remained constant between periods t and t-1. Thus, TFP is a residual and it measures the 'efficiency' in the use of resources as well as all other factors that may contribute to explaining the output decline and are not included into the computation.

Table 3.12 reports the results. Capital accumulation has been very high during the 1970s and it was still high in the eighties explaining to a great extent the output growth. Labour contribution has been more modest in both periods and total factor productivity fell since the early seventies. This seems rather similar across

sectors. Thus, capital per worker increased and output per worker decreased between 1971 and 1990. Enterprises embarked into the transition process with large endowments of both capital and labour. During the transition, the rate of capital accumulation declined sharply while employment declined moderately and only starting from 1993. The greatest part of the output decline in this period is explained by total factor productivity suggesting that an important part of the story should be found in the use of inputs and alternative explanations. In effect, this particular approach measures the contribution to output of factors' input but it says little about the causes of inputs swings and falls in productivity.

Table 3.12 - Computation of total factor productivity

	NMP growth	TFP growth	Lab. growth	Cap. growth	Inv./NMP	Cap./NMP
Agriculture						
1971-1994	-0.01	-0.06	0	0.06	0.26	2.96
1971-1980	0.01	-0.08	0.01	0.09	0.22	1.55
1981-1990	0	-0.04	0.01	0.04	0.33	3.65
1991-1995	-0.09	-0.05	-0.04	0	0.18	4.79
1990	0.12	0.08	0.04	0.03	0.32	3.91
1991	-0.23	-0.32	0.09	0.03	0.42	5.2
1992	0.29	0.22	0.03	0.03	0.18	4.15
1993	-0.07	-0.01	-0.09	-0.01	0.08	4.41
1994	-0.21	-0.1	-0.19	-0.04	0.02	5.4
1995	-0.21	-0.23	0.02	-0.05	0.01	6.53
Construction						
1971-1994	-0.01	-0.03	0	0.03	0.07	0.74
1971-1980	0.06	0.03	0.02	0.04	0.08	0.53
1981-1990	0.01	-0.03	0.03	0.04	0.08	0.68
1991-1995	-0.2	-0.15	-0.14	-0.03	0.01	1.44
1990	-0.08	-0.13	0.06	0.03	0.08	0.8
1991	-0.02	0.04	-0.12	0.03	0.03	0.84
1992	-0.43	-0.53	-0.02	-0.03	0.02	1.42
1993	-0.19	-0.05	-0.21	-0.06	0.01	1.64
1994	-0.18	-0.04	-0.22	-0.07	0	1.87
1995	-0.21	-0.05	-0.24	-0.07	0	2.18
Industry						
1971-1994	-0.01	-0.04	0	0.07	0.39	6.95
1971-1980	0.05	-0.01	0.02	0.1	0.42	3.91
1981-1990	-0.01	-0.04	0.01	0.06	0.46	6.66
1991-1995	-0.13	-0.11	-0.07	0.01	0.21	13.59
1990	-0.05	-0.07	-0.02	0.05	0.48	8.46
1991	0	-0.02	0.01	0.04	0.34	8.76
1992	-0.17	-0.18	-0.04	0.02	0.17	10.8
1993	-0.14	-0.07	-0.13	0	0.14	12.55
1994	-0.28	-0.27	-0.08	-0.01	0.24	17.21
1995	-0.08	-0.03	-0.09	0	0.15	18.62
Transp. And Comm.						
1971-1994	0	-0.02	0.01	0.05	0.43	9.21
1971-1980	0.06	0.01	0.03	0.08	0.56	7.03
1981-1990	0.03	0	0.03	0.04	0.45	8.34
1991-1995	-0.16	-0.13	-0.05	0.01	0.12	15.29
1990	-0.02	0.04	-0.09	0.04	0.46	8.87
1991	-0.06	-0.03	-0.06	0.04	0.23	9.77
1992	-0.19	-0.2	-0.01	0.01	0.07	12.14
1993	-0.14	-0.11	-0.06	-0.01	0.07	14.06
1994	-0.26	-0.27	-0.03	-0.01	0.14	18.8
1995	-0.14	-0.1	-0.06	-0.01	0.12	21.7
Trade and procurement						
1971-1994	0.01	-0.01	0	0.03	0.08	1.76
1971-1980	0.05	0	0.04	0.05	0.1	1.48
1981-1990	0.02	0.01	0	0.03	0.08	1.7
1991-1995	-0.09	-0.06	-0.09	0	0.02	2.41
1990	0.01	-0.05	0.1	0.02	0.07	1.73
1991	-0.01	-0.04	0.03	0.02	0.08	1.79
1992	-0.14	-0.14	-0.05	0.03	0.01	2.15
1993	-0.11	-0.04	-0.12	-0.01	0	2.38
1994	-0.18	-0.16	-0.06	-0.02	0	2.86
1995	-0.02	0.11	-0.23	-0.02	0	2.86
Total						
1971-1994	0	-0.03	0.01	0.07	0.38	5.69
1971-1980	0.05	-0.01	0.02	0.12	0.43	3.49
1981-1990	0.01	-0.02	0.02	0.05	0.44	5.82
1991-1995	-0.1	-0.08	-0.03	0.01	0.15	9.81
1990	-0.01	-0.05	0.05	0.05	0.45	7.04
1991	-0.08	-0.09	-0.01	0.04	0.37	7.98
1992	-0.04	-0.03	-0.02	0.02	0.14	8.46
1993	-0.1	-0.04	-0.09	-0.01	0.1	9.3
1994	-0.18	-0.16	-0.05	-0.01	0.1	11.19
1995	-0.09	-0.09	0	-0.01	0.06	12.1

Source: Constructed from De Broeck and Kostial (1998)

A final point on the initial conditions concerns the existence (or non-existence) of proper institutions. The role of institutions in economic development has been amply documented by the 'institutional' literature (North 1990, 1993). Applied to the process of transition, this literature would point to the necessity for a clear set of institutions for markets to be able to develop. The lack of these fundamental institutions (laws, rules, norms and enforceable contracts) would prevent markets from operating effectively preventing a correct allocation of resources and undermining growth. Some evidence on this front has been found by Dewatripont and Roland (1996) who argued, for instance, that a gradualist approach to reforms may be preferable *"in a world of aggregate uncertainty, reversal costs and complementarity between reforms"* (p.22), conditions which may well have been present during reforms. Brunetti, Kisunko and Weder (1997) looked across twenty transitional economies focusing on the explanatory power of institutional factors such as rules, political stability, security of property rights, the judiciary and corruption. They find that these institutional factors may explain a large part of differences in FDI and growth across countries.

Though difficult to measure, it was shown in section one of this chapter that institutional constraints existed in Kazakhstan due to the physiological time necessary to construct the new state. Market legislation came with a substantial delay over transitional reforms with the result that for a few years markets operated in a legislative vacuum. This allowed the development of adverse phenomena. Few well-connected groups profited from the privatisation process to quickly accumulate wealth that was then either employed in illicit activities or exported. The sell-off of strategic enterprises was not transparent in the early years and allowed some groups to cash in on short-term rents while avoiding investing in the regeneration of the firms. The growth of private banking was partly linked to this phenomenon as banks were often opened to keep and export these forms of rents. While these claims are speculative and difficult to be supported by data, illicit behaviour on the part of public officials during the early years of reforms are now subject of public investigations in both Kazakhstan and Russia.

Generally speaking, the institutional vacuum is explained by the time lag that was necessary for the newly independent states to build the state institutions. The establishment of such institutions does not guarantee *per se* the correction of the distortions developed during early reforms (corruption exists whether the proper legislative framework exists or not) but at least it lays the foundations for a proper state to develop while it legitimises law enforcement where the will to crack down on illicit activities exists.

3.3. The role of reforms

It would be very difficult to argue that without the reforms initiated towards the end of the 1980s the Soviet republics would have experienced in such a short time a recession similar to what has been witnessed to date. The Soviet decline appeared as irreversible but the time lag to achieve such a decline would have been much longer. Reforms had obviously a negative impact on output, at least in the medium term. What is not clear is whether the type, speed, timing or sequencing of reforms should be to blame.

The speed of reforms idealised as the 'gradualist' versus the 'big-bang' approach to reforms has been illustrated amply in the literature and it will not be resumed here. In effect this debate finds its roots in orthodox economic theory and the dispute between neo-classical/monetarists/laisser-faire vs. the Keynesian/public spending/ interventionists economists. *De facto* the process of transition in most countries has been dominated by a neo-classical/monetarist/laisser-faire ideology (not necessarily the reform agenda) and for many schools this practice has overshadowed important aspects of reforms such as institutional, organisational and industrial reforms (Knell 1996). For some scholars, the excessive restrictionary cycle that these policies entailed may have been at the root of the excessive output decline. Price and trade liberalisation have been acknowledged as important factors during the early years (Gomulka 1996b) but it is debated

whether these measures were necessary pills to be swallowed by highly distorted economies or if they were the product of a distorted western ideology.

While this debate centred around two fundamentally distant ideological views it overshadowed the analysis of the actual content of each reform and the applicability and scope of reforms in different macroeconomic and institutional contexts. In a country such as Kazakhstan timing and sequencing seem far more important issues than the actual speed of reforms. For instance, it is not clear why a new born state which is trying to set-up the basic institutions should embark in the process of privatisation prior to the establishment of a working parliament, judicial courts or even a constitution. Or why a country that does not have direct control over monetary institutions and the legal tender should promote price and trade liberalisation. Looking back, it is the order of reforms that seems to have followed an awkward sequence.

Not surprisingly, a theme now popular to explain the recession is the disorganisation of the production process due to disruption in input and output flows occurred in the early years of transition. Williamson (1992) highlighted early on the role played by the disruption in the production chains caused by the break-up of the Soviet Union. This argument was initially dismissed by some on the ground that entrepreneurs could simply shift to alternative suppliers if credit and working capital were available. Later, the disorganisation argument became more popular and we find it endogenised in transitional models such as in Blanchard (1997).

Disorganisation in Kazakhstan occurred in different forms and at different times. The initial disorganisation occurred when the Soviet republics started to acquire certain autonomy and applied Soviet trade directives unequally, creating inter-republic price distortions and introducing the first barriers to inter-republican trade. Later, the disorganisation of the payments system played an important role in explaining the reduction of inter-republican exchanges. This occurred during a period of hyperinflation and monetary instability. With independence, the

disorganisation of the state apparatus including the disorganisation of the central decisional bodies, the hierarchical system and the bureaucracy explained the slow pace and chaotic order of reforms, which in turn further disrupted exchanges. This was documented in section one of this chapter.

De Broeck and Kostial (1998) back the disorganisation hypothesis showing the extent of the disruption in intra-FSU deliveries with data on interstate deliveries between 1991 and 1995 which show profound declines for strategic commodities (p. 64). Also, a dispersion index of the monthly changes in output applied to 36 industrial commodities shows a high variability until 1994, suggesting bottlenecks in the supply chain rather than swings in final demand (p. 25). In a footnote, the same authors report evidence from two enterprises' surveys carried out in 1993 and 1994 as follows:

> *"In a 1993 sample survey of Kazakh enterprises by the International Development Center of Japan (Mitsui, 1994), enterprises were asked which factors most negatively affected their production; difficulties in getting intermediate inputs were ranked first. Similarly, an end-1994 KNSA survey on the causes of shut-downs of enterprises and individual production enterprises found that 47 percent of the total loss of working time was reported to have resulted from shortages of intermediate inputs and power shortages." (p.24)*

We saw how, at independence, the country relied on inter-republican trade. Considering that a large portion of these exchanges were in primary or intermediate products, it could be argued that a disruption of inter-republican trade might have had a multiplicatory negative effect on domestic production. Indeed, raw materials apart, production suffered most in sectors originally heavily reliant on trade (imports in particular) and the extent of the output decline is amplified moving down the production chain. This may also contribute to explain the 'wait and see' attitude of enterprises who hoped to re-establish production links and waited long before starting to lay-off workers, preferring to transfer the costs of such disruptions on real wages declines and wage arrears.

Why entrepreneurs now free to seek their own suppliers and negotiate their own prices did not turn to alternative suppliers is not difficult to understand. First, this was a new activity for Soviet entrepreneurs that needed to be learnt. Very few direct contacts were in place between entrepreneurs and their foreign suppliers as trade boards dealt with most of the bilateral relationships in Soviet times. Second, distances from alternative suppliers were more often than not prohibitive. Central Asia is extremely isolated from large industrial economies except for China from whom the Soviet authorities always kept a distance and where an initial 'contacts' base was simply non-existent. Third, the intermediate supplies needed by the ex-Soviet firms were technologically obsolete and hardly replaceable by what industrial economies would be producing. It was not atypical for these firms to have a single and exclusive supplier of a particular commodity in the whole of the Soviet Union and alternative Western suppliers would not be an option for some firms. Fourth, the basic infrastructures to conduct business including the post and telephone systems, railways and air transport were very poor indeed and presented major obstacles when it came to implement payments and deliveries.

A further argument supporting supply-side recession dynamics and inter-linked with the sequencing question was the so-called '*credit crunch*'. Restrictionary monetary policies and difficult access to credit reduced the financing capacities of enterprises who, as a consequence, experienced a reduction in production (Calvo and Coricelli 1992). For countries such as Poland this argument has been refuted (Berg and Blanchard 1993, Gomulka 1996b) but Kazakhstan presents some clear indications that credit was indeed a rare commodity.

Table 3.13 shows outstanding bank loans for the period 1990-1995. The decline in loans is sharp in all sectors and particularly evident starting from 1993. This should not be as surprising if we think that the economy was burdened with arrears in all areas of financial transactions including wage arrears, inter-enterprises arrears, tax arrears, debts repayments arrears towards banks and the state and payments arrears towards foreign suppliers. In such a climate, business confidence is non-existent and banks require non-accessible guarantees or non-

affordable interest rates. Besides, banks did not benefit from significant household savings but had to rely mostly on the central bank to borrow lending capital. In other words, commercial banks would borrow only if solvent customers had already been identified. Difficult access to credit is also one of the main complaints regularly reported by enterprises when questioned about their difficulties[9].

Table 3.13 - Outstanding bank loans (Real terms)

	1990	1991	1992	1993	1994	1995
Total	**100**	**90.3**	**51**	**16.6**	**4**	**2.4**
Short-term	100	108.9	67.8	21.8	5.3	3
Industry	100	209	70	19.8	11.8	4.8
Agriculture	100	75.7	45.4	14.6	4.4	0.4
Construction	100	46.7	16.1	3.1	0.9	0.8
Transport and Communication	100	90.1	63.2	163.7	3.7	4.9
Trade and Procurement	100	69.8	52.9	11.9	1.8	0.5
Other	100	218.7	191.3	67.7	13.6	14.9
Long-term	100	40.8	6.5	2.9	0.6	0.9

De Broeck and Kostial (1998)

One argument in contrast with the credit crunch story is the 'soft-budget' constraint argument. It could be that loss-making enterprises continued to be subsidised during transition turning public savings into bad investments and contributing to maintain a distorted price system and a misallocation of resources. In Kazakhstan this was partly true until 1992 but transfers to enterprises in real terms declined quickly afterwards and cannot be held responsible for the 1994 slump for example. What, instead, may be argued is that a certain laxity concerning the closure of non-profitable enterprises persisted well into 1996 because of the legislative vacuum and because of poor implementation of existing measures. However, while this may have slowed down the process of reallocation and restructuring, it can hardly be identified as a major cause of the output decline in the early years.

[9] This was either the first or the second complaint reported by the management of enterprises I visited between April 1996 and September 1999 in the cities of Almaty, Kustanay, Aktyubinsk and

3.4. Additional explanations

An alternative hypothesis points at a *sectoral misallocation* of resources. This argument suggests that price distortions and restrictions in factors' mobility determine an incorrect allocation of resources among sectors contributing to a slow down in production in potentially viable sectors. De Broeck and Kostial (1998) are sceptical in regards to this argument in Kazakhstan. They argue that the pre-transition price structure was distorted as compared to world prices. For instance, prices in power, oil and gas and metallurgy sectors were below world market levels while prices for timber, paper, light and food industries were above world market. During the transition, a process of convergence of prices towards world levels has been observed. Investments and labour, according to the authors, adjusted moving from sectors such as light industry and into electricity, fuel and metallurgy. Sectoral composition of value added and the computation of sectoral productivity changes support the argument that factors have been moving in the expected direction. Therefore, the authors conclude that sectoral misallocation has not been a very significant factor in explaining the output decline.

A few comments about the above interpretation seem relevant. Concerning investments, these have indeed grown in relative terms in sectors such as extraction and fuel production and low relative prices have probably been instrumental in these shifts. It is not surprising that the oil and gas sectors benefited from the largest share of investments given Kazakhstan endowments. This is where FDI went and it is considered the national industrial priority. More complex is the interpretation of labour reallocation. De Broeck and Kostial use as evidence for labour reallocation sectoral shares data and data on labour turnover. While sectoral shares data show significant changes across sectors, they do not show whether the numbers have been growing or declining in any sector. We will see in Chapter 4 that employment declined in almost all sectors and that sectoral shares changes occurred because some sectors have experienced a deeper

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Astana in the course of four successive visits.

recession than others. Some workers may have moved across sectors, but it cannot be argued with such data.

Moreover, the data on labour turnover presented by De broeck and Kostial (p. 67) show turnover increasing over time. This is taken as evidence of an acceleration of the process of labour reallocation. What will be argued in Chapter 4 is that the high turnover is due to high instability and insecurity in labour conditions. Workers take up new jobs not knowing whether they will be paid or not at the end of the month and enterprises take up workers not knowing if they will be able to sustain production in the following month. Contracts are short-term and hiring and separations rates are very high. This is a symptom of a poor labour market rather than of a healthy reallocation of labour.

With De Broeck and Kostial we agree that few barriers were in place during transition for free movement of capital and labour resources. In any case, barriers during transition were less than those in place during the pre-transition period and price distortions determined by bottlenecks in resources mobility were more likely to be present before and not during transition. Hyperinflation contributed in complicating the picture of the relative price structure and we have to conclude in accord with the cited authors that there is little evidence in support of the sector misallocation argument as a substantial cause of the output decline.

A different set of explanations points to *demand factors*. A fall in real incomes characterised the transition in all economies with the subsequent fall in consumption and savings. Liquid assets in banks lost much of their value particularly during the January 1992 price liberalisation and during the first months of the new legal tender, the tenge. These events resulted in a loss of confidence in the banking system visible in a relative increase in consumption and currency in circulation. On the government side, expenditures have been cut severely both in the early periods of reforms and during the stabilisation period. In some cases cuts were larger than the decline in revenues and the reduction in public consumption and investments caused a further decline in aggregate

demand. Private investments were small by definition in the early years of transition and the credit crunch described above did not help in boosting this side of demand. Foreign direct investment concentrated in few sectors and they did not compensate by any means the public investment decline. For CIS countries such as Kazakhstan, external demand declined and remained weak as all republics faced similar problems. Thus, the decline in aggregate demand is an important part of the story though it remains difficult to isolate the size of this effect and its components from the demand-supply cycle. Moreover, it is a 'second round' effect of the recession starting as a consequence of the first shocks and becoming only later a cause of further decline.

4. Summary and conclusions

Initial conditions, trade shocks, disorganisation of the former Soviet industrial apparatus, the organisation problems related to the formation of the new states and poor monetary policies in the early years have been identified in this chapter as the main causes of the output decline in Kazakhstan between 1990 and 1996. It could be argued that the real economic disaster has been the break-up of the system of the Soviet Union before the creation of its substitutes.

The first shock to the system occurred with the first disruption in inter-republican trade between 1987 and 1989. This was caused initially by political reasons as the republics progressively increased their decisional autonomy, and later by restrictions to trade introduced by the same republics in response to price distortions emerged. This situation continued over the period 1990 and 1991 when a certain monetary laxity was in place, Moscow was loosing monetary control, the ruble became increasingly overvalued and the payments system experienced the first serious difficulties. Overhanging inflation accumulated during the period and when price liberalisation was launched inflation took off. The hyperinflationary period that followed created uncertainty and a reduction in real wages and savings. The initial decline in investment and public spending contributed to a

first contraction in aggregate demand. The first severe decline in output occurs in construction and transport due to cuts in Soviet subsidies, inflation and trade contraction. The cause of the subsidies cuts are political and linked to independence while the primary causes of inflation are the first uncertain enterprise reforms of the Gorbachev period and the first disorganisation of inter-republic trade and of the monetary regime. Therefore, disorganisation, politics and bad monetary policies explain the first fall in the output decline.

In 1992, inter-enterprises arrears accumulate fast while the inter-republican payments system collapses. In an attempt to clear arrears, the government injects a large quantity of enterprise credits, pushing up inflation while monetary control is still in the hands of Russia. The first trade liberalisation reforms take place during this period while trade falls quickly because of the progressive break-up of inter-industrial linkages across the Union and difficulties in settling exchanges. Later in 1993, the new ruble is introduced and large quantities of old rubles flow into Kazakhstan, heating inflation again. The local currency is launched in November and the first protracted devaluation causes a further monetary shock. Investments continue to free-fall, union's transfers are further cut and enterprises experience serious financial difficulties. Inter-enterprises and wage arrears start to accumulate again. The output contraction now affects sectors heavily reliant on imports such as manufacturing. Partial trade reforms in this case further complicated the existing inter-republic asymmetries and deepened the extent of the disruption in the flows of goods. Inter-enterprises arrears clearing operations and poor handling of currency reforms determined the monetary shock. Thus, the break-up of the Soviet Union, disorganisation of trade and the monetary system and poor trade and monetary policies are to be blamed for the output decline between 1992 and 1993.

Following the introduction of the tenge in November 1993, the rapid initial devaluation of the currency and a second attempt to clear inter-enterprises arrears with public credits to enterprises, inflation experiences a new shock early in 1994. With the stabilisation packages adopted in 1994 and 1995, monetary stability is

finally achieved, the tenge stabilises and interest rates turn positive. During the year, the protracted recession takes its toll on households and consumption declines severely. Together with the continued investment decline and the heavy cuts in government spending, aggregate demand declines. On the enterprise side, difficulties in supplies' delivery, cuts in government assistance determined by the stabilisation packages, the consequent credit crunch and the loss in both internal and external demand slows down production dramatically in 1994. During 1995, production decreases further and in 1996 the decline finally comes to a halt. In 1994 and 1995, the output decline is most visible in manufacturing and consumers' goods. This time it is an equal combination of supply and demand side factors that determined the output decline in the form of a contraction in public and private consumption and credit crunch.

On the whole, it is not the speed or type of transitional reforms that should be blamed for the recession but the timing and sequencing of these same reforms. Prices and fiscal reforms (including stabilisation) have certainly had an impact, but price liberalisation is not a cause in itself of a recession (it only exposes unbalances present in the system determined by other factors) and fiscal reforms have had both positive and negative outcomes depending on when and how they have been implemented. State system reforms and privatisation started to operate in a significant way when the recession was almost completed. Restructuring occurred only on paper with some state initiatives achieving very little success. It is not possible to measure and assess the role played by something that did not happen and we cannot blame these non-reforms for the recession. However, the total lack of effort of Soviet authorities in maintaining the Soviet economic system as long as necessary to carry out proper institutional reforms in the Republics is evident. Paradoxically, it is the lack of a reform 'plan' that can be blamed for a very poor record of initial economic reforms, the disorganisation of production and consequent fall in output.

Trade reforms have been important but the decline in trade is to be attributed to the disorganisation of the Soviet organisations rather than to world prices

exposure and decline in export. Imports declined far more than exports. The loss of international markets due to poor competitive standards may have played a role later when Kazakhstan trade started to increase with non FSU countries, but by then the output decline was coming to an halt.

The recession affected the structure of the economy seriously damaging manufacturing, the heart of the industrial system. The energy sector is supported by FDI and by the government but it will not be able to deliver rents for some years to come. It is also a capital-intensive sector and cannot address employment problems. Moreover, the fact that it is export oriented signifies that it will hardly be able to foster production in other domestic sectors and that terms of trade are likely to suffer.

By the time the recession gradually came to a halt, life savings and Soviet subsidies had disappeared and enterprises' profitability had declined sharply. Local commercial banks no longer had the resources to finance enterprises, foreign investments had been limited in size and concentrated in the oil and gas sectors and foreign borrowings (mainly IMF and credits from Russia) went into stabilisation measures and import subsidies. The monetary policy implemented post-1994 exemplified by the stabilisation packages found a solution to monetary stability but absorbed almost entirely the policy agenda and prevented the use of public funds for reforms in the production sphere. As the state remained the only realistic possible source of investment and growth, monetary austerity shut the door to this last resort.

The question that remains to be answered is what other entity in the economy but the state could have gathered the necessary resources to invest in restructuring and technological upgrade and what other entity but the state should have been (and should be) in charge of a comprehensive industrial reform. These are two areas where the Kazakh state has been absent and where it will be called to deliver in the years to come if the private sector is unable to re-emerge on its own from the

standstill it is currently in. Growth has been estimated at 1.7% in 1997 (EU 1998) while it turned negative again (-2.5%) in 1998 (CSAK 1999c).

Also, private enterprises prosper in environments where the basic infrastructure for a market economy including energy supply, transports and communications, a proper financial system, contracts and contract enforcing mechanisms work sufficiently well. An enterprise does not live in a vacuum but in a complex tissue of industrial relations that relies to a great extent on collective goods (infrastructures and institutions) for which the state is ultimately responsible. In an early stage of industrial development, such as the one in which most CIS countries now find themselves, the establishment of market infrastructures for collective use can hardly rely on private finance or initiative. This seems to be the fundamental paradox of the current state of transition in Kazakhstan.

CHAPTER 4

THE REALLOCATION OF LABOUR

The previous chapter looked at the causes of the recession in Kazakhstan so that now we have a better sense of the difficulties encountered by enterprises during the transition. This chapter turns to the supply side of the labour market measuring labour variables and attempting to determine the form, direction and causes of the reallocation of labour. Section 1 overviews some general features of labour markets in the CEE and Russia. Section 2 attempts to identify who is who is the labour market in Kazakhstan making use of administrative and survey data. Section 3 turns to flow measures determining the main features of the reallocation of labour and discussing the possible determinants. Section 4 concludes.

1. The reallocation of labour in the CEE and Russia

The dichotomy in labour market dynamics between the CEE and CIS countries exposed in chapter 1 persists if we take a closer look at some general stylised facts.

In the CEE[1], employment declined significantly and in line with output. Private sector employment has been growing both as an outcome of the privatisation process and as the emergence of a new private sector. There has been a significant outflow from paid employment into self-employment. Labour turnover is high relatively to Western countries. The reallocation of labour tends to avoid the unemployment pool. Recruitment seems to take place from employment rather than unemployment. The size of the labour force and labour force participation have declined in most countries. Numerous workers took the path of economic inactivity either by taking early retirement or by taking over household responsibilities and dependency ratios (the ratio of pensioners to contributors) have increased.

[1] This paragraph and the next are a summary of the main findings of two large surveys of labour markets in the CEE, Allison and Ringold (1996) and Boeri, Burda and Kollo (1998)

Unemployment in the CEE has been growing rapidly and stabilised on high levels. The unemployment pool has been fairly stagnant in most countries with a low inflow and a lower outflow. Long-term unemployment has been growing. Unemployment seems to be higher among women, the young and the unskilled and these characteristics seem to be associated with long-term unemployment. The number of discouraged unemployed has increased. Regional disparities are evident and serious mobility constraints exist in the forms of poor housing markets and high transport costs. Real wages devalued quickly in the early years of transition and re-valued slowly afterwards. Overall, CEE labour markets have experienced a process of convergence towards Western European labour markets behaviour (Allison and Ringold 1996; Boeri, Burda and Kollo 1998).

Many of these features have been found in Russia but the Russian labour market presents deeper problems, some additional peculiarities and paradoxes which makes it a more complex case. According to administrative data, employment decline has been contained in relation to the output decline and unemployment has been growing relatively slowly. This view has been maintained until recently by some authors (Commander and Tolstopiatenko 1998, p. 170; Lehmann, Wadsworth and Acquisti 1997, p. 1). According to this view of the labour market, employment has declined little because of soft budget attitudes on the part of the government, real wages decline, wage arrears, wages paid in kind, unpaid leave and shortening of working hours. Workers have traded wages for employment (Commander and Yemtsov 1995). Others argued that employment is much smaller than it appears while real unemployment is high by any standards if we only take a closer look at real employment in enterprises, population dynamics and economic inactivity (Standing 1997, p. 29). Households surveys (table 1.5) have shown that real unemployment in Russia is much higher than registered figures.

Private sector employment in Russia has been growing fast but more as a by-product of privatisation than as a genuine creation of new private jobs. Generally,

work conditions in the private sector seem better than in state enterprises but job tenure is shorter, labour turnover higher and wage arrears are widespread (Gimpelson and Lippoldt 1998, p.16). The role of the new private sector[2] in labour dynamics is also uncertain. When this has been observed with surveys, the understanding is that enterprises in this sector perform on average better than state and privatised enterprises (Richter and Schaffer 1996). However, this sector is small, confined to few economic areas and not particularly healthy (Clarke 1999, p. 54-56). Private employment tend to be in small entities and it is particularly large in the trade and catering sector.

Concerning the reallocation of labour in Russia, labour turnover is high in most sectors but employment has declined in almost all sectors. Hiring tend to be from employment rather than unemployment as it was the case for the CEE countries. In the early years of transition, the unemployment pool seemed more dynamic than in the CEE with low inflow rates and larger outflow rates but in recent years a tendency to stagnation has been observed and long-term unemployment has been increasing. Russia has also experienced a demographic crisis of much larger proportions than the one reported for some CEE countries in the early years, with declining birth rates, soaring death rates and large migration flows (Ellman 1997, Cornia and Paniccia' 1996).

As it was argued in chapter 1, efforts aimed at disentangling the apparent contradictions of the Russian case have focused on the enterprise, the process of restructuring and its determinants and the reallocation of labour between economic sectors. In chapter 2, it was suggested instead that transitional models built around the demand side of the economy fail to perceive important labour market dynamics such as the reallocation of labour from wage to non-wage employment which constituted a very important aspect of the reallocation of labour in the CIS. A labour supply model was proposed to take a more comprehensive view of the process of transition and it was argued that this approach might be more appropriate in a CIS context. In chapter 3, we saw that

[2] Newly established entities with private ownership

privatisation and restructuring have not been fundamental elements of real changes in Kazakhstan. Privatisation did not determine *per se* a qualitative amelioration of management practices while restructuring hardly occurred. Thus, if privatisation and restructuring have not been important elements of change in Kazakhstan did the reallocation of labour occur at all? And, if it did, what is the form and what determined such reallocation?

2. Labour market stocks: Who is who in the labour market[3]

In this section we look at the adult population in Kazakhstan and explore first levels and changes in labour market stock variables. A standard ILO approach is followed. After a few demographic considerations, employment, self-employment, underemployment, unemployment and economic inactivity will be analysed in this sequence.

2.1 Population

As it was the case for other CIS economies, Kazakhstan underwent an unprecedented population crisis during the transition with a declining birth rate, an increasing death rate and strong emigration. Table 4.1 presents the basic demographic statistics between the last two censuses carried out in 1989 and 1999 respectively. The time series has been reconstructed by the CSAK recently on the basis of preliminary results of the last census[4].

Between 1989 and 1998 the population of Kazakhstan declined by approximately 1m people passing from 16.2m in 1989 to 15.2m in 1998. Birth rates declined by more than one third while death rates increased by almost a third reducing the natural growth of the population by more than 70% of its 1989 value. Both immigration and emigration have been important phenomena during the period but while immigration was rather strong during the early years, it declined significantly later on. Emigration instead continued to be the most significant factor in population changes throughout the period with major peaks in 1994 and 1995. Almost 3.5m people emigrated during the period. This trend has been partly compensated by a natural cumulated growth of 1.5m people and a cumulated immigration of 1m people. Internal migration has also been a significant

[3] The data in this section could not have possibly been put together without the help of the staff in the national statistical agency (CSAK) and in the Ministry of Labour and Social protection in Almaty who provided published and unpublished material and took the time to explain classifications.

[4] Data are not published and were obtained for kind concession of CSAK staff during my last visit to Kazakhstan in September 1999.

phenomenon. An estimated 2.2m people moved from rural to urban areas and an estimated 1.7m people moved from urban to rural areas accounting for a net rural-urban migration of about half million people.

Table 4.1 – Demographic trends

/1,000	Population	Birth rate	Death rate	Nat. growth	Immigr.	Emigr.	Net migrat.	Popul. growth	Rur/Urb flow
1989	16194	23.52	7.79	15.73	11.40	20.69	-9.29	6.44	0.85
1990	16298	22.22	7.89	14.33	11.04	21.67	-10.63	3.70	0.74
1991	16358	21.59	8.21	13.38	10.44	18.70	-7.96	5.42	0.54
1992	16452	20.52	8.36	12.16	9.82	24.96	-14.42	-2.26	0.36
1993	16426	19.21	9.50	9.70	6.76	22.90	-15.71	-6.01	0.38
1994	16335	18.71	9.82	8.89	4.31	36.38	-32.06	-23.16	0.59
1995	15957	17.30	10.57	6.74	4.46	28.81	-24.34	-17.61	0.79
1996	15676	16.15	10.59	5.56	3.44	21.50	-18.04	-12.48	0.68
1997	15481	15.01	10.34	4.67	2.46	26.04	-23.57	-18.90	0.73
1998	15188	14.64	10.16	4.48	2.67	22.38	-19.68	-15.19	0.69
1989-1999 (% change)	-6	-38	30	-72	-77	8	112		-19

Source: Constructed from CSAK(1999b)

Population changes of this kind are usually observed in times of major catastrophes such as wars, famines or natural disasters. None of these factors can explain the population changes observed in Kazakhstan and the process of independence together with reforms and the economic crisis seem the only candidates available to explain such trends.

The causes of the demographic crisis in transitional economies and in particular the causes of the mortality crisis are widely debated in the literature.[5] Some authors argued that the mortality crisis in is in fact a statistical artefact (Eberstadt 1994) while others pointed to adverse and long-term environmental degradation and changes in health behaviour (Feshback and Friendly 1992). An alternative and popular explanation links such crisis to the economic recession and the labour market insecurity generated during the transitional period, the so-called mortality-stress hypothesis (Cornia and Paniccia' 1996). Using the 1996 Kazakhstan Living Standards Measurement Survey (1996 KLSMS[6] henceforth), I found elsewhere

[5] See Cornia (1996) for an overview
[6] See appendix for details on the survey

that the odds of suffering from death-related morbidity are significantly higher for the unemployed, particularly male unemployed in age 35-54 (Verme 1998). Crude Death Rates (CDR) show the sharpest increase among men in working age in Kazakhstan (WHO 1996) which is in contrast to most population crises where mortality rates increase particularly for the most vulnerable, children and the elderly above all. Moreover, the latest census shows that the mortality crisis is not a statistical artefact while the environment degradation and health habits hypothesis seems rather implausible in the light of the speed of the crisis and its close association with the output decline.

Labour market stress, insecurity and perhaps discrimination can also explain the emigration trend observed. The share of the ethnic Kazakh population increased from 40.1% to 53.4% between 1989 and 1999 (CSAK 1999a). Little is known about who died or who emigrated in relation to skills, profession and occupation, though it is known that the Slavic population constituted the bulk of emigration and that the same population previously occupied key positions in industry and in the administration. The government also encouraged ethnic Kazakhs living abroad to repatriate by means of generous housing schemes and labour market policies.

These particular trends affected the structure of the population. Given that birth and death rates typically affect the population at the two tail ends, by reducing the number of old people and the number of children, the short-term effect should be a decrease of the non-working age population. However, the increase in the death rate and emigration have been particularly acute among the working age population. WHO (1996) figures confirm that Crude Death Rates (CDR) show the sharpest increase among men in working age while UNDP (1996) estimated that up to 60% of the emigrants have been people in working age looking for better working opportunities abroad. As a result of this process and during the period we are concerned with (1990-1996), the population below working age declined, the population in working age remained approximately the same and the population above working age increased. In conclusion, the potential workforce as described

in chapter 1 did not change significantly in size but it did change in ethnic and skills' composition.

2.2. Employment

The impact of the reforms and of the economic recession on employment has been multi-fold. On the one hand, the recession determined a general decline in employment, which affected almost every sector of the economy, and a general decline in working conditions in the form of reduced working hours, wage arrears, wages paid in kind and unpaid leave. The process of privatisation, on the other hand, determined a change in ownership from state ownership to other forms including joint ventures, mix state/private, collective and individual ownership. Privatisation also entailed a de-scaling of production units from large to small. This has been mainly determined by the privatisation of large state distribution networks in the trade and catering sector, by the sale of assets to the public such as trucks in the transport and communication sector, by the sub-division of large kolkhoz and cooperatives into smaller units in the agricultural sector and, to a minor extent, by a process of industrial restructuring implemented by means of sub-dividing large enterprises into smaller units of production.

These changes did not spark a visible reallocation of labour across sectors except for a movement of workers from various sectors of the economy to trade and catering. Nor, these same changes increased visibly the share of fully private ownership in enterprises. Most enterprises with more than fifty employees have been turned into some form of shared ownership where the state typically maintained a significant share together with one or more investment funds and the employees (chapter 3). It is doubtful whether this type of ownership can be classified as private given that decision making is in the hands of a collection of bodies that are accountable to different masters. Employment in this group of enterprises has declined in all sectors. Enterprises with less than fifty employees are more likely to be private but this group did not show any significant improvement in terms of employment (CSAK 1994-1999). As far as type of

ownership is concerned, the only form of private employment visibly growing has been a substantial growth in self-employment.

Administrative data on employment are usually provided in two forms: by sector of activity and by type of ownership. Table 4.2 presents the official figures as reported by the CIS statistical body[7]. Between 1990 and 1996, employment declined by approximately 1.3m people, equal to 16.5% of initial employment. It is evident that employment declined in all sectors of economic activity with the sole exceptions of trade and catering and credit and insurance. Trade and catering is in fact the only sector which shows a substantial net growth in employment. The sector showing the worst employment decline is construction followed by industry, transport and communication, education culture and art and science and scientific services.

As a consequence of the asymmetric decline across sectors, sectoral shares have changed. In the material sphere, industry and construction have lost out in favour of transport and communications, trade and catering and to a minor extent agriculture while very little changes are visible in the non-material sectors. From these data, we are not able to discern whether workers have moved across sectors and how. However and given what we just said, we can infer that trade and catering has absorbed workers from industry and construction unless the growth of this sector has been due to previously inactive individuals turning active. This is very similar to what has been reported for Poland and Hungary, especially between 1989 and 1992 (Boeri, Burda and Kollo 1998, p.37) and for Russia between 1990 and 1996 (Richter 1998, p.3).

CIS-Stat (1998) also reports the shares of state employment by sector. How 'state' is defined is not reported in the publication and we cannot speculate about the definition adopted but what is visible from table 4.2 is how privatisation has affected the different sectors. The primary material sectors of industry,

[7] The national statistical agency does not publish employment data by sector for the whole economy but only for large and medium enterprises. However, these data are produced and supplied to the CIS statistical body which then publish them in the CIS labour market review.

construction, and agriculture, once almost the exclusive domain of the state, have been turned largely into non-state ownership. Transport and communications maintains instead an important state share due to the fact that large state companies such as railways and airways remained state property. Trade and catering, traditionally the least 'public' of the sectors, became almost exclusively the domain of non-state entities by 1996. Overall, state ownership passed from 83% in 1991 to 34.6% in 1996. Therefore, employment by ownership became split across the lines of a mainly private material sphere and a mainly public non-material sphere. This is obviously due to the fact that public services represent the bulk of employment in the non-material sphere and that privatisation was not extended to public services such as education and health.

Table 4.2 – Employment by sector

	1990	1991	1992	1993	1994	1995	1996	90-96	1990	1996	1991	1996
									Sector	share	State	share
Industry	1539	1561	1502	1305	1201	1088	1061	-478	19.7	16.3	89.5	22.7
Construction	908	796	780	620	482	364	307	-601	11.6	4.7	84.3	20.9
Agriculture and forestry	1726	1876	1933	1759	1419	1444	1523	-203	22.1	23.4	70.8	8.6
Transport and communications	704	673	657	448	551	507	491	-213	9.0	7.6	95.6	70
Trade and catering	561	576	549	481	847	1035	1387	826	7.2	21.4	49.1	3.4
Information, computer services	21	17	13	11	10	6	6	-15	0.3	0.1	93.1	70.2
Housing and public utilities	292	252	232	282	270	274	217	-75	3.7	3.3	88.3	62.7
Education, culture and art	886	813	753	837	788	781	679	-207	11.4	10.5	97.7	98.7
Science and scientific services	136	121	122	43	38	37	35	-101	1.7	0.5	96	80.1
Health, Physical culture and social ins.	456	453	462	429	428	417	383	-73	5.8	5.9	97.9	97.9
Credit and insurance	39	42	49	54	49	50	43	4	0.5	0.7	82.4	53.3
General administration	155	166	181	180	147	148	144	-11	2.0	2.2	85.8	93.8
Others	383	370	339	477	352	400	219	-164	4.9	3.4		
Total	**7806**	**7716**	**7572**	**6926**	**6582**	**6551**	**6495**	**-1311**	**100.0**	**100.0**	**83**	**34.6**

Source: CIS-Stat (1998)

The fact that state share in total employment declined substantially in the material sphere does not tell us much about what alternative forms of ownership prevailed. Administrative data by forms of ownership are available but the classification

adopted has changed significantly in 1994 due to the need of accounting for new forms of ownership and because of the adoption of ILO recommendations. The IBRD (1996, p.196) published the old classification for the period 1990-1995 but the series is consistent only until 1993[8]. Looking at the period 1990-1993, we learn that state sector employees declined from 5.9 to 4.5 millions, that employees in leased enterprises, economic associations and cooperatives have declined and that employees in joint-stock companies and the number of subsidiary and private agricultural workers have increased[9].

The traditional official document providing summary information on the labour market in Kazakhstan is the so-called 'Balance of Labour Resources'. The CSAK has revised the format in 1994 and a consistent series is now available for the period 1994-1998. Such document contains information on employment, unemployment and economic inactivity. In table 4.3 the employment data are reported. It is evident a sharp decline in employment in enterprises with more than fifty employees and a sharp increase of self-employment and, to a lesser extent, an increase in small farms employment. The trend in employment in small businesses is not clear but it seems that a certain recovery has been occurring starting from 1995. Overall, we observe a shift from large to small entities.

Table 4.3 – Employment by size

	1994	1995	1996	1997	1998
Total employed	**6582**	**6552**	**6519**	**6472**	**6128**
All legal entities with more than 50 employees	5415	5039	4402	3666	3100
Small farms	69	102	209	277	255
Small businesses	344	159	148	204	294
Self-employed (1)	541	1069	1568	2157	2304
Other(3)	213	182	193	168	174

Source: CSAK (1995,1996,1997,1998,1999)

[8] These data are not entirely clear as items do not add up to totals. They are also not informative starting from 1994 as the classification changed.

[9] In contrast with macro data on ownership, it is interesting to note that in 1996 and according to the KLSMS respondents, more than 72% of enterprises' employees declared to be working for the state or public organisations. This would suggest that ownership changes occurred in many enterprises have not been understood or perceived as significant management changes by workers.

The pre and post 1994 employment series by type of ownership we dispose of are not entirely compatible but a complete series can be put together taking into account only wage labour (employees) against non-wage labour (self-employment). We can also use the 1996 KLSMS to compile comparative figures so that we can get a flavour of the solidity of administrative data. This is done in table 4.4. Overall, a drastic decline in wage labour is visible from 93.4% of total employment in 1990 to 59.5% in 1998. The growth of self-employment is consistent throughout the series reaching a staggering 37.6% of employment in 1998. The 1996 figures put together using the KLSMS have been located in the table between 1995 and 1996, given that the survey was conducted in July and that the rest of the figures are annual averages. As it can be seen, survey figures are quite close to administrative estimates fitting the trend very well indeed[10].

Table 4.4 – From wage labour to self-employment

	1990	1991	1992	1993	1994	1995	1996*	1996	1997	1998
Wage labour (employees)	93.4	93.4	84.9	79.3	88.5	80.9	78.7	73.0	64.1	59.5
Non-wage labour (self-employment)	3.8	4.4	5.4	5.9	8.2	16.3	21.3	24.0	33.3	37.6
Others non defined	2.8	2.1	9.7	14.8	3.2	2.8	0.0	3.0	2.6	2.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total employed (as % of population)	**47.9**	**47.2**	**46.0**	**42.2**	**40.3**	**41.1**	**40.5**	**41.6**	**41.8**	**40.3**

Source: CSAK (1995, 1996, 1998, 1999), 1994-1998 IBRD 1996b, (*)1996 KLSMS

Table 4.4 also shows the employment rate as percentage of the population. Estimates of population by age emerging from the 1999 census were not yet available at the time of writing and population estimates provide the only terms of reference in place of the population in working age. However, in the population section it was argued that the working age population remained approximately stable between 1990 and 1996 and we should not expect employment rates calculated as a percentage of the working age population to show a radically different trend. As it can be seen from the table, the employment rate declined by about seven percentage points, not as dramatically as the employment figures would suggest. It is also remarkable that the figure calculated from the 1996 KLSMS fits the trend observed in administrative data almost perfectly. It may be

[10] See appendix for an explanation on how the employment figures have been calculated from the

that there are significant under or over estimation of employment figures at a disegregate level, but overall administrative figures seem rather realistic.

2.3. Self-employment

Self-employment is perhaps the most complex category to define in employment. The ILO in the 1993 resolution on the International Classification of Status in Employment (ICSE 1993) identifies six categories of workers according to status: Employees, employers, own-account workers, members of producers' cooperatives, contributing family workers and workers not classifiable by status[11]. The resolution makes also a clear distinction between paid employment and self-employment jobs. The distinction is based on the degree of control that individuals have on their income and on the degree of responsibility that they have in relation to the welfare of the entity where they work. Following this principle, the resolution categorises in paid employment the employees and in self-employment the employers, own-account workers, members of producers' cooperatives and contributing family workers. This is the most internationally recognised classification as it has been absorbed into the 1993 UN System of National Accounts.

According to the description provided in the 1995 Balance of Labour Resources presented in table 4.3, self-employed individuals include persons who are engaged in trading and services activities and work on their own account and expenses, persons helping family members, people working without payment in family enterprises and others. According to Koulakeev[12] and Katarvaeva (1997), self-employment includes employers, persons working on their own account, members of production cooperatives and individuals assisting family members as suggested by the ILO.

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survey.
[11] http://ilo.org/public/english/120stat/res/icse.htm
[12] Head of CSAK at the time of writing

Thus, the ILO definition is now recognised and accepted in Kazakhstan while it was argued before that this measure is fairly accurate as compared with the survey measure we dispose of. The actual accounting of such measure, meaning the individual items used by the CSAK to assemble the self-employment figures, remains unclear.[13] However, what I learned is that self-employment figures are estimates assembled putting together information from the various ministries, including the ministry of revenues.

The information from the ministry of revenues is in fact fundamental. All self-employed individuals are registered with the ministry and they are assigned a tax code. This code is essential for any individual because it is required when opening a bank account or when paying utilities such as gas or electricity. The code can obviously be fabricated but the Ministry reckons that this is a small phenomenon. That is because having a tax code does not imply paying taxes. In theory, the self-employed are taxed with the purchase of a so-called 'patent'. This patent legitimises the activity, it is estimated according to the type of activity performed and it includes income taxes as well as social benefits and pensions contributions. It is a 'forfait' that can be paid annually or monthly. In practice, a little more than 100,000 patents were paid in 1998 when the number of registered self-employed was more than 2.3 millions. Moreover, one person can buy more patents for different activities. We could estimate that roughly 4% of the self-employed paid taxes in 1998. This does not necessarily mean that the rest of the self-employed have regular income and enjoy tax freedom because many people may be registered as self-employed to 'earn' a regular status when in fact they are doing nothing. A formal status is needed to undertake any administrative procedure whether it is applying for an identification document or a residency permit.

[13] In interviews I conducted with government officials at the central statistical office, two regional administrations and the Ministry of revenues in different rounds and over a period of four years, I came to the conclusion that the number of self-employed produced in administrative data is in effect the number of people registered as self-employed at the Ministry of Revenue as the following paragraph would suggest. However, this was never clearly stated in any of the interviews.

Thus, a large number of self-employed do not pay taxes while it seems that altogether very few employed escape some form of registration. This is not that surprising giving that control was a great ability of the Soviet state and that it remains an important feature of the Kazakh state today. This paradox causes, in my view, confusion when we have to distinguish between formal and informal activities. It really depends what we mean by informal. If informal is meant to be 'escaping the government eye', than this is a very small phenomenon in Kazakhstan today as survey figures show (though illicit activities are likely to escape surveys as well) and as far as the employment count is concerned. If informal means not paying taxes at all, than the informal sector is very large indeed and found mainly among the self-employed (and illegal activities) as one would expect. In other words, informal or 'invisible' may be the activity that is actually performed and/or the income that is actually perceived but not necessarily the employment status.

Therefore the distinction between the informal sector and self-employment is a question of definition and we should expect self-employment containing a large portion of informal activities[14]. This is not surprising giving that informal activities are more likely to be of a very small scale. In fact the use of self-employment as a proxy for the informal sector is a rather common practice in the study of labour markets in developing countries. Magnac (1991) in a study of the Colombian labour market uses self-employment as a proxy for the informal sector and so do Pradhan and van Soest (1995) in a study of informal employment in urban areas of Bolivia.

In conclusion, self-employment as calculated in administrative statistics should be thought of as a box that contains individuals with their own business, whether

[14] Kolev (1998) carried out a study of labour supply in the informal economy of Russia making use of the Russian Longitudinal Monitoring Survey, Round IV. In his work, individuals are classified as informal job holders if they have a second paid occupation or if they perform any kind of paid work having declared not to work when asked about their main occupation. The definition of self-employed used in this and the following chapter and calculated from the 1996 KLMS includes owners of enterprises, business owners working on their own account and providers of personal services. If second jobholders are added to the category and the informal sector is measured

formal or informal, and other individuals who prefer a formal self-employed status to other statuses either because they cannot justify belonging to any other status or because the self-employment status is more convenient for different reasons including tax purposes.

Table 4.5 shows the distribution of the self-employed among different categories according to the classification that could be made from the survey[15]. The self-employed are naturally a very heterogeneous category and small groups had to be identified for each category to contain similar individuals. The owners of enterprises are the largest category. This group includes individuals who claimed to own the enterprise where they work. This may mean that respondents are single entrepreneurs but also that they are members of collective organisations or shareholders who feel they have some degree of control on their activity. As the distinction between employees and self-employed is based on the degree of control that individuals have on their own activity and income, this category belongs to the self-employed according to the ILO[16].

according to Kolev definition, self-employment contains two thirds of individuals included in the informal sector.

[15] The total self-employment figure calculated from the household survey is rather close to the administrative estimate but in reality the sub-categories from the two sources may not overlap entirely. For instance, a formally registered self-employed in administrative data who is not engaged in any activity is classified as inactive by the survey while survey respondents who declare to own the enterprise where they work and are therefore classified as self-employed may be classified as employees by administrative data.

[16] In the following chapter, when sectors will be compared, 'owners of enterprises' will be dropped from self-employment to render the category as homogenous as possible.

Table 4.5 - Self-employed

	obs.	%
Total	**622**	**100**
Owners of enterprises	241	38.7
Business owners	159	25.6
of which: traders	*99*	*15.9*
goods producers	*17*	*2.7*
service providers	*23*	*3.7*
others	*20*	*3.2*
other service providers	97	15.6
Professionals	40	6.4
Other employed not working	11	1.8
Other unpaid family workers	53	8.5
Other farming or trading	14	2.3
Other employed not classifiable	7	1.1

Source: 1996 KLSMS

The second largest category is business owners, those who declared to run their own business and who are not employees. It is noticeable the small number of people involved in the production of goods, only 2.7% of total self-employment. Most business owners seem to be traders, probably mostly shopkeepers and street vendors. Service providers are also a very large category if we include the category 'other service providers' which represents those providing personal services. All together, 19.3% of the self-employed provide some sort of service and most of these are personal services such as cleaning, driving, guarding and the like. Administrative data suggested that the largest flow of workers was into self-employment activities in the trade and catering sector and these data seem to support this aspect of the labour market.

2.4. Underemployment

According to the ILO, underemployment exists when a person's employment is inadequate in relation to specified norms or alternative employment, taking into account the person's occupational skills. The ILO suggests to adopt the definition of 'visible underemployment' defined as all persons in paid or self-employment whether at work or not at work, involuntarily working less than the normal duration of work determined for their activity, and who were seeking or available for additional work during the reference period. It is obvious that such distinctions

can be made with sample surveys designed *ad hoc* and cannot be established with administrative data or with surveys not designed for this specific purpose. Therefore the indicators of underemployment we use here are reduced income and reduced working hours, the two fundamental criteria that justify and define employment.

The employment service in Kazakhstan has been collecting, starting from 1993, data on hidden unemployment in large and medium enterprises, by means of questionnaires sent to enterprises. These data are gathered on a monthly basis and provide information on the number of enterprises which totally stopped production, partially suspended production, totally shifted to part-time regime or partially shifted to part-time regime. Also, the number of workers working for these enterprises is given as well as the total number of workers on forced leave. The aggregate data offer a picture of the quantity of labour not employed to its full extent in large and medium enterprises (table 4.6).

The number of enterprises which totally stopped production increased steadily during the period. This indicates that economic and financial conditions have been particularly hard, but also that many enterprises virtually shut have not been liquidated or bankrupted. This can be due to the soft-budget constraint and slow development of the legislative framework, as well as to social obligations which tie enterprises to the provision of social services, or to other factors such as small rents occurring to managers and hopes of re-establishing production in the medium term.

Table 4.6 - Enterprises in difficulty (end of period)

	1993	1994	1995	1996
No. of ent. which stopped production completely	83	230	390	559
No of workers (.000)	16	50.9	81.6	61.9
Average workers per enterprise	*193*	*221*	*209*	*111*
No. of ent. which partially suspended production	514	1016	1231	1129
No of workers (.000)	257	372	368	304
Average workers per enterprise	*501*	*367*	*299*	*269*
No. of ent. which totally shifted to part-time regime	131	264	427	410
No of workers (.000)	73	100	88	90
Average workers per enterprise	*559*	*380*	*207*	*217*
Total enterprises	**728**	**1510**	**2048**	**2098**
Total workers	**346.5**	**523.6**	**538.1**	**454.5**
Total average workers per enterprise	***417***	***322***	***238***	***199***

Source : RK (1995, 1996, 1997), ADB AND UNESCO (1995)

The number of enterprises which partially suspended production or totally shifted to part-time regime increased until 1995 and decreased in 1996. This may signify that some of the enterprises under these categories survived during a period of uncertainty thanks to reduced regimes, but that eventually some of them entered the category of enterprises which totally stopped production or closed down altogether. If this is the case, the good news is that inflow into the enterprises in difficulties group started to decline in 1996. On the other hand, outflow of enterprises (bankruptcy and liquidation) and the number of related workers were still growing in 1996. If the number of workers working for enterprises which partially shifted to part-time regimes is added to the figures (not in table), the number of workers working for enterprises in difficulty as a percentage of employment in large and medium enterprises can be estimated at 6.9% for 1993, 11% for 1994, 12.7% for 1995 and 12.3% for 1996.

While these data offer some information on the general malaise of enterprises, they say little about actual working conditions including income and working time. We saw in the previous chapter that real wages deteriorated severely explaining in part labour retention on the part of enterprises, state enterprises in particular. However, work conditions deteriorated also in relation to other aspect of employment including a growth in wage arrears and unpaid leave practices, the use of alternative forms of payments such as wages paid in kind and a general reduction in working time. Administrative data offer little information on these

aspects while a more comprehensive picture can be assembled making use of the 1996 KLSMS.

According to the survey, most of the *employees* declared to work at the level of their qualification (78%) though more respondents work at a lower level (16%) than on a higher level (6%). Only 18% have subordinates suggesting that the great majority of employees are blue collar, though this question was not specifically addressed in the survey. Less than 5% of employees own shares of the enterprise where they work and only a little more than two percent received some form of dividend. About 7% declared to have a second occupation.

Employees seem to suffer considerably in terms of wages and working time. Table 4.7 cross-tabulates wages actually paid (in tenge = 72 USD at the time of the survey) with time actually worked during the 30 days previous to the survey. Data are reported in percentage of total employee respondents. It is shown that more than 15% of employees did not work at all, though a few of these have received some payments. More than 42% did not receive any salary, though only a little more than 10% did not perform any work. In fact, almost one fourth of the sample worked full-time or more without receiving any salary at all. More than 10% of the whole sample did not work and did not receive any salary though only 3.7% of the sample were officially on unpaid leave. Technically speaking, it is hard to argue that these people are employed. It is evident that, as compared to income, those who work supply a fairly substantial amount of time, or at least they report to do so.

Table 4.7 – Employees: wage vs. working time

Tenge / Hours	0	1-5,000	5,001-10,000	> 10,000	Total
0	10.48	2.71	1.64	0.76	**15.59**
1-150 (part-time)	8.13	7.02	2.22	1.24	**18.61**
151-200 (full-time)	17.06	21.55	8.71	4.44	**51.75**
> 200 (over-time)	6.62	4.35	2.13	0.93	**14.04**
Total	**42.29**	**35.63**	**14.70**	**7.37**	**100.00**

Source: 1996 KLSMS

Many of those who are not paid do not work for factories completely at a standstill but probably work for a reasonable number of hours in low productivity jobs and activities generating a low or sporadic cash flow. Alternatively, they may be producing goods which are not sold or they may not be paid with the income generated, as it is the case for state enterprises employees. It is not even the case that a large amount of employees produce the goods with which they are paid. According to the survey, less than 5% of the employees received some amount of salary paid in kind[17].

For the *self-employed* the information is scattered across the different categories considered. Among the 'owners of enterprises', most work at the level of their qualification as for the employees, though the share of respondents who work at a higher level is marginally higher than for the employees. Owners of enterprise are more likely to have subordinates (25.3%) and much more likely to possess shares (30.3%) as well as to be paid dividends (10.2%) than the employees. Also, around 11% of respondents in this group declared to have a second occupation. Therefore, it seems true that many of those who responded to own the enterprise where they work did so because they enjoy a certain degree of participation in ownership and profits and they are, generally speaking, a more 'entrepreneurial' category.

Concerning 'business owners', traders is the only category large enough to provide any meaningful statistics. Most trading businesses seem to be rather young. Over 70% of trading activities were less than one year old at the time of the interview and more than 94% were less than two years old. Only 5.8% of the traders declared to purchase goods abroad while trading does not seem to be a full-time activity for many workers. Almost 42% of the traders declared to have been busy six months or less during the 12 months before the survey.

Business owners were also asked to estimate the current value of their activity. Table 4.8 shows the distribution of answers divided in four classes. Over 50% of

[17] Wages paid in kind are estimated and included into the wage as calculated in table 4.7.

activities had a smaller value than a good monthly salary (10,000 Tenge=approx.139 USD) while two thirds were below twice the amount of this measure. It is obvious that these businesses are very small and do not require significant capital investment. For the 'other services provider' we know that for 76.6% of respondents it is an occasional activity. The survey does not offer any other general information for the residual self-employment categories.

Table 4.8 - Business owners: Value of business

	Percentage	Cumulative percentage
No value	25.31	25.31
1-10,000	25.31	50.62
10,001-20,000	13.58	64.20
> 20,000	35.80	100
Total	**100**	

Source: 1996 KLSMS

Given the general difficulties which employment presents, it is not surprising that job insecurity runs high while expectations about the future are grim. Almost 80% of employees respondents declared to be either anxious or very anxious about losing their job while more than 70% said to be not much sure or not sure at all about finding a new job if made redundant. The questionnaire also provides information on happiness and expectations for the employed as a whole. Generally speaking there is very little satisfaction with life and very poor expectations about the future. There is also not much difference between the employees and the self-employed with the self-employed only marginally more satisfied and optimistic than the employees (Box 4.1).

Box 4.1 – Employed: Expectations, satisfaction and poverty self-perception

Questions	Answers	Employees *% of resp.*	Self-employed *% of resp.*
Do you think you and your family would be better or worse off in 12 months time?			
	Much better	2	3.0
	A bit better	12.1	15.4
	Nothing would change	48.6	44.6
	A bit worse	21.9	20.4
	Much worse	15.4	16.6
Imagine a staircase with 9 stairs where 1 are the poor and 9 the rich. Where are you personally?			
	1	5.5	5.8
	2	14.8	11.3
	3	29	28.7
	4	26.7	31.0
	5	19.6	18.8
	6	3.5	2.5
	7	0.7	1.7
	8	0.2	0.2
	9	0.0	0.0
To what extent are you satisfied with your current life?			
	Completely satisfied	3.0	3.5
	Satisfied	13.4	13.8
	Yes and No	18.1	20
	Not much	35.3	32.1
	Not at all	30.2	30.6
To what extent do you worry that you won't be able to provide for your family during the next 12 months?			
	Very much	74.1	74.2
	A bit	16.8	15.8
	Yes and no	5.4	5.7
	Not much	3.0	2.7
	Not at all	0.7	1.6

Source: 1996 KLSMS

2.5. Unemployment

Before we embark in any estimate of unemployment, it is necessary to be clear about what is meant by unemployment. The concept is not unique across countries, which is cause of relevant difficulties when it comes to international comparability[18]. The ILO defines as unemployed a person who is without work, currently available for work and seeking work during the reference period (usually one-week). There are generally two means to count the unemployed using this criterion. The register kept at employment services and households surveys. In western economies, the two measures obtained through these two channels tend to be very close and the register is considered a good approximation of the real size of unemployment. In CEE countries, it has been found that a discrepancy between registered and surveyed figure is more common, though this discrepancy can be positive or negative depending on the country and the time considered. In CIS countries, the register persistently underestimates by several fold real unemployment (chapter 1, tables 1.4 and 1.5).

Kazakhstan is no exception in the CIS scenario and registered figures underestimate by several fold the survey measure we dispose of as it will be shown. This is due to a combination of reasons including distances from employment services and transport costs and poor assistance in terms of unemployment benefits and labour market policies provided by the service. However, it is also the case that the criteria adopted in Kazakhstan to register the unemployed were quite strict during the period considered. According to Art. 5 of the law on employment, the unemployed are persons without income, registered at the State Employment Service as seeking employment, willing and able to work and who have not been offered a suitable job by the service.[19]

[18] See Bean (1989) for a comparative statistical study of unemployment in OECD economies.
[19] Isteleulova (1997)

When a job seeker approaches the employment office, the person is given a list of employers to contact[20]. The candidate visits the employers during the first week. If, during this week, the person declines two 'suitable' offers, the right to be registered as unemployed is lost. The same is true if two job offers are declined after retraining. 'Suitable' is what the employer service thinks it is for the candidate. However, the employment service has little information on the actual working conditions offered by employers such as whether the wage is regularly paid or not. This kind of information is more likely to be available to job seekers who contact the potential employer and many offers are turned down simply because vacancies are just not proper jobs. Also, those who qualify to register as unemployed can stay on the roster for only six months. After this period another six months have to pass by before they can actually re-register. Control is also severe given that during the time applicants are on the record they have to appear to the employment offices on a regular basis (every one or two weeks). Therefore the criteria used in Kazakhstan to classify the unemployed was generally more restrictive than the ILO definition.

Moreover, the standard ILO definition is not exactly what the ILO itself would theoretically apply to a country such as Kazakhstan. In fact the ILO would tend to be more permissive in certain particular situations as the following extract from the 1982 resolution indicates:

> *'In situations where the conventional means of seeking work are of limited relevance, where the labour market is largely unorganised or of limited scope, where labour absorption is, at the time, inadequate or where the labor force is largely self-employed, the standard definition of unemployment (...) may be applied by relaxing the criterion of seeking work'.*[21]

Arguably, the above scenario would correspond to many transitional economies, especially those of the former Soviet Union. Therefore the unemployment pool has flexible boundaries determined by the definition we like to chose. As different

[20] Information in this paragraph was gathered in the course of visits at employment offices in the cities of Aktyubinsk and Kustanay in April 1996 and September 1997 respectively.
[21] http://www.ilo.org/public/english/120stat/res/ecacpop.htm

criteria serve different purposes, it seems that the most objective and reasonable approach is the one of estimating different unemployment rates using different and well-specified definitions. This is the approach we prefer to follow here once we turn to estimate unemployment from the 1996 household survey.

Official data on registered unemployment were non-existent during the Soviet times as the phenomenon was not recognised although existent[22]. From 1991, the CSAK produces every month a document called 'About the labour Market and Social Support of the Unemployed' which contains information gathered through employment services. Table 4.9 presents statistics compiled on the basis of this document. It is shown that the total number of applicants to employment services tripled during the period[23]. Not all the applicants are unemployed and the number includes students, pensioners and employed people in search of an occupation. These last three categories together represented 15% of all applicants in 1991, but in 1996 their share was only 0.6%. Perhaps, the poor success of these categories in receiving support from the employment service explains this trend and indeed the strong growth of the unemployed applicants must have left scarce resources available for the other categories. Students, pensioners and employed applicants cannot be registered as unemployed, they are not entitled to benefits and they are only assisted with the job-search.

Some of the unemployed applicants find an occupation during the year, exiting the count of the unemployed. This share declined from 47.5% of the total number of unemployed applicants in 1991 to 17.8% in 1996. It is obvious that placing people into jobs became harder for the employment service. As a consequence, the number of people registered as unemployed has grown from 2.5% to 70.1% of the unemployed applicants. The rest of the unemployed applicants (those who do not find a job or are not registered as unemployed) are those who are omitted from

[22] Towards the end of the 1980s emerged that a large number of *bezrabotizsa* (without work) were to be found in Central Asia. This number has been estimated at 3.5m people for the region as reported in Marnie (1992)

[23] The figures do not contain double counts but they may include people who are recorded for very short periods of time because they find employment quickly.

the register for reasons such as refusing a job offer twice or nor being able to provide the necessary documentation to register.

Table 4.9 - Employment services statistics

(.000)	1991	1992	1993	1994	1995	1996
Employed	2,118	10,775	2,420	3,065	2,526	601
Students	11,395	12,091	5,173	5,944	2,371	455
Pensioners	3,273	3,226	1,988	1,836	1,598	2,333
Unemployed	157,348	256,683	227,179	259,833	345,419	558,607
Total Applicants (1)	**184,798**	**282,775**	**236,760**	**270,678**	**351,914**	**561,996**
Registered unemployed (1)	**4,000**	**70,400**	**78,100**	**112,900**	**203,100**	**391,747**
Registered unemployed (2)	4,000	33,700	40,514	70,078	139,557	282,409
(%)						
% of applicants unemployed registered as unemployed(1)	*2.5*	*27.4*	*34.4*	*43.5*	*58.8*	*70.1*
% of applicants unemployed placed into jobs (1)	*47.5*	*36.8*	*44.0*	*34.2*	*26.1*	*17.8*
% of registered unemployed on benefits(2)	*25.3*	*53.9*	*38.1*	*47.4*	*52.7*	*61.2*

Source: CSAK (1991-1996); (1) Jan.-Dec.; (2) End of period

Since 1994, the central statistical office (CSAK) produces estimates of total employment on the basis of a variety of informations provided by different ministries and on the basis of demographic changes. These figures are published in the 'Balance of Labour Resources' and show that unemployment increased from approximately 536,400 people in 1994 to 970,600 in 1996, equal to 7.5% and 13% of the labour force respectively. In other words, the CSAK recognises that real unemployment is several times registered figures.

The 1996 KLSMS offers a wide range of questions through which the unemployed can be counted and estimating this measure is inevitably a subjective exercise. The ILO guidelines offer a valuable help in deciding where to draw the line but definitions are subject to interpretations and the standard features of transitional labour markets have not yet sunk into international definitions, though the ILO has made a real effort to adapt classifications.[24] Table 4.10 shows unemployment figures calculated using different definitions of unemployment. The most 'relaxed' of the definitions (U1 – Wish to work and not employed) shows an unemployment rate of 17.2% keeping in mind that we included into

employment all individuals who performed any amount of work for pay or not. Definitions are in order of magnitude and at the bottom of the scale are the registered unemployed on benefits who represent only 6.4% of those who declared a wish to work.

Table 4.10 – Unemployment

	freq.	% lab. force
U1 - Wish to work (not employed)	608	17.2
U2 - Job seeker (self-evaluation)	420	12.6
U3 - Job seeker past 30 days or registered	365	11.1
U4 - Job seeker past 30 days at employment centres	198	6.3
U5 - Job-seeker past 7 days	139	4.5
U6 - Registered unemployed	106	3.5
U7 - Registered unemployed on benefits	39	1.3

Source 1996 KLSMS

The registered unemployed figure shows an unemployment rate of 3.5%. If we take the registered unemployment figure for July 1996 from the employment service statistics (260,000) and we calculate the respective registered unemployment rate we obtain a figure of 3.8%. A rather close figure given the different sources. For accounting purposes and in the rest of the work, U3 will be used as the figure for total unemployment in Kazakhstan. U3 includes those who actively sought work during the 30 days previous to the survey or who were registered at the employment services. Given the poor labour market conditions it is unlikely that job seekers search for jobs on a weekly basis and it seems sensible to count on the basis of at least 30 days. The U3 figure of 11.1% is also not too distant from the 13% figure (1996 average) estimated by the CSAK in the balance of labour resources. Again survey and administrative figures seem to support each other.

The unemployed (U3) as captured by the survey seem to be very young and well educated while they do not show either a gender or an urban bias (table 4.11). More than half of the unemployed are between 14 and 25 years of age. Average education is 11.2 years, well above the average for the population 14 and older of

[24] See Chernyshev, I. (1997 and 1994) for a discussion of labour statistical issues in transitional economies

10.3 years but below the average for the employed of almost 12 years. This is a well-educated group by international standards but still less educated relatively to the employed. Women are slightly over represented among the unemployed while an urban or rural bias is not evident.

Once we distinguish between those who approach the employment services and those who don't the outlook changes significantly. Among those who do not apply to employment services the majority are males while the opposite is true for those who apply. The difference between the two groups is very visible and it increases moving to those who are actually registered. It is obvious that men tend not to apply to employment offices and have also fewer chances to be registered as unemployed. There is not much difference instead in terms of location between those who apply and those who don't but rural applicants have definitely better chances to be registered once they have applied. A major difference is again visible when we look at age classes. The young tend to apply less to employment services and have a smaller probability to be registered as unemployed. Instead, the best educated seem to be more successful in registration.

Table 4.11 – Unemployed, applicants to employment services and non

	% males	% urban	14-25	26-59	>= 60	edu. av.
U3 - Unemployed	47.8	50.68	50.41	47.95	1.64	11.2
U3a - Unemployed, did not apply empl. Off.	51.9	49.7	57.8	39.5	2.7	11.1
U3b - Unemployed, applied to empl. Off.	43.6	51.7	42.8	56.7	0.56	11.3
U3c - Unemployed, registered	41.6	40.6	34.6	64.4	1	11.6

Source: 1996 KLSMS

Being mostly young, the unemployed have also little working experience. More than 61% of the unemployed have worked at some stage though less than 20% of those who have worked have worked for more than two years. The quasi-totality (96%) left employment after 1989 as one would expect and about 50% during or after 1994, the year of the massive lay-off. Also, turnover is not very high within the unemployment pool. Less than 10% of the unemployed have been hired at least once during the 12 months before the survey. More than one third declared that would accept any job offered while one fourth said they were looking for a

professional job. A little more than 20% said they were looking specifically for a well-paid job while a minority (about 8%) said to be looking for part-time or flexible jobs.

2.6. Population and the labour force

It is now possible to calculate the labour force (or economically active population) by simply adding the employed to the unemployed. As we explained in the population section, revised estimates of the population in working age were not yet available at the time of writing and we have to calculate the employment and the labour force participation rates as a proportion of the entire population. Also, unemployment statistics for the period 1990-1993 are only available for the registered unemployed and estimates of total unemployment for the period had to be made on the basis of registered figures.[25]

The employment rate declined by approximately seven percentage points which is less than what one would expect when looking at the employment decline (table 4.12). The explanation is to be found in emigration trends and the general decline of the population. The unemployment rate grows steadily until 1996 and then seems to stabilise around 13% of the labour force. The labour force participation rate decreases up to 1994 and then increases again. This is explained by the fact that the employment decline effect is offset by the unemployment increase effect around 1994. As we showed before, the 1996 KLSMS estimates seem to be consistent with the administrative series presented.

[25] To do so, the 1994 ratio between registered and total unemployment was calculated and then applied to the period 1990-1993. This is obviously a rough measure and data until 1994 should be treated with caution.

Table 4.12 – The labour force

(.000)	1990	1991	1992	1993	1994	1995	1996*	1996	1997	1998
Employed	7806	7716	7572	6926	6582	6552	2925	6519	6472	6128
Unemployed (1)	0	31	261	315	536	808	365	971	968	925
Labour force	7806	7747	7833	7241	7118	7360	3290	7490	7440	7053
Out of labour force	8492	8611	8619	9185	9217	8597	3886	8186	8041	8136
Population	16298	16358	16452	16426	16335	15957	7176	15676	15481	15188
Employment rate (% pop)	*47.9*	*47.2*	*46.0*	*42.2*	*40.3*	*41.1*	*40.8*	*41.6*	*41.8*	*40.3*
Unemployment rate (% lf)	*0.0*	*0.4*	*3.3*	*4.4*	*7.5*	*11.0*	*11.1*	*13.0*	*13.0*	*13.1*
Labour force participation rate (% pop)	*47.9*	*47.4*	*47.6*	*44.1*	*43.6*	*46.1*	*45.8*	*47.8*	*48.1*	*46.4*

Source: CSAK (1995, 1996, 1997, 1998, 1999), CIS-Stat (1998), 1996 KLSMS;
(1) Values until 1993 are estimates on the basis of registered unemployment (*)KLSMS

3. Labour market flows: The reallocation of labour

The insecurity and poor labour conditions offered by employment in enterprises, the alternative opportunities offered by self-employment, the scarce assistance provided to the unemployed and the general decline in social assistance contributed in activating a number of flows between employment in enterprises, self-employment, unemployment and the inactive pool. All these 'pools' have experienced significant changes during the transition. Table 4.13 shows the now familiar trends of a severe reduction in employees, sharp growth in the self-employment and unemployment pools together with certain stability in the inactive pool.

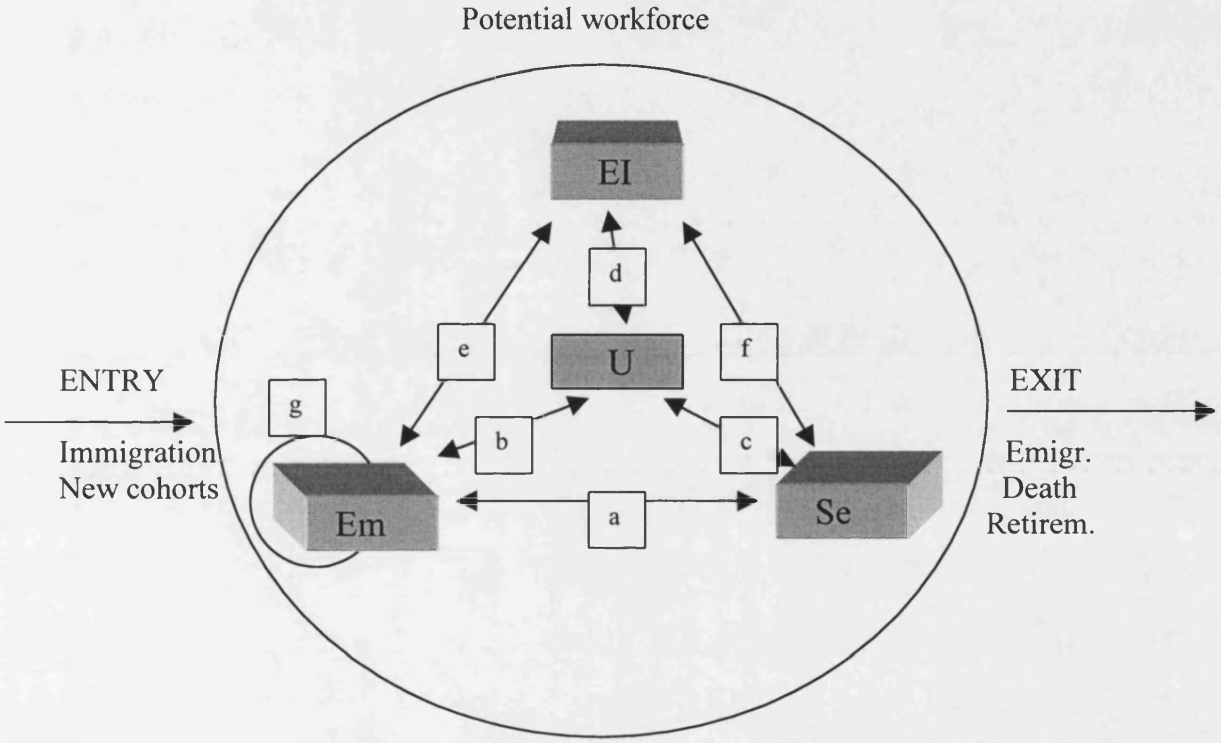
Table 4.13 – Labour market 'pools'

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Employees	46.1	45.1	43.6	39.7	37.0	34.4	31.6	27.9	25.2
Self-employed	1.8	2.0	2.4	2.5	3.3	6.7	10.0	13.9	15.2
Unemployed	0.0	0.2	1.6	1.9	3.3	5.1	6.2	6.3	6.1
Inactive	52.1	52.6	52.4	55.9	56.4	53.9	52.2	51.9	53.6
Population	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Constructed from CSAK (1995, 1996, 1997, 1998, 1999) and IBRD (1996)

These four pools generated in effect six bilateral flows, all of which have been fairly active during the transition. For instance, it is evident from table 4.13 that during the first massive lay-offs in 1993 and 1994 many workers have been

accommodated into the inactive pool. On the contrary, between 1995 and 1997 the further decline in enterprises employment has been absorbed by self-employment and unemployment and the two categories managed to pull in people from the inactive pool too. In other words, a reflux from inactivity back into the labour force has occurred. Such phenomenon explains in part the growth of unemployment irrespective of what has been happening within the enterprise sector. Schematically, we can illustrate the labour market flows as follows:



Where Ei = Economic Inactivity, Em = Employment in enterprises (wage employment), Se = Self-employment and U = Unemployment

Flows 'b' and 'g' are what transitional and labour market models put at the centre of analysis. 'b' is the flow from formal employment to unemployment and vice-versa. 'g' is the reallocation of labour across enterprises which can take the form of either a state-private reallocation or a cross-sector reallocation. This is what will be analysed in the next section.

Other two flows rather well documented have been flows 'e' and 'd'. Flow 'e' is constituted in essence by early retirement schemes and by women turning to household activities, two phenomena that have been very strong in the early years of reforms. A ADB/UNESCO report (1996) reported that between 1990 and 1995 about half of the kindergartens in Kazakhstan have been closed. Many hospitals either closed or reduced inpatient intakes forcing families to keep ill relatives at home. These and other factors have encouraged women in particular to leave the labour force irrespective of employment conditions. Flow 'd' is mainly determined by the existing degree of 'seeking'. An 'inactive' person who start seeking a job moves by definition into unemployment and, vice-versa, an unemployed who stop seeking falls into inactivity. A certain job seeking fatigue visibly occurred in Kazakhstan from 1996 onwards and labour force participation rates have been shown to decline in most transitional economies.

The remaining flows, 'a', 'c' and 'f', the ins and outs of the self-employment pool, are perhaps those flows we know less about. Flow 'a' is what we documented in the section on employment. It is the flow from enterprises in various sectors of the economy to self-employment mainly in the trade and catering sector. Flow 'c' is constituted by people who take up self-employment activities after a period of unemployment or who fall into unemployment because unable or unwilling to run a business. Flow 'f' is composed by people who move with agility from running a household to home production, helping out relatives, occasional trading or providing small services such as cleaning or driving. This flow is very 'fluid' and cannot be captured with accuracy in any interval of time.

Thus, outside the world of enterprises a whole set of labour flows has occurred as a result of transitional changes. Such flows are naturally less affected by changes in wages and productivity while they are sensitive to changes in other factors such as social benefits regimes, quality and availability of community services, pensions' real values and personal and household characteristics. These are 'real' factors that affect people's labour decisions. These factors also naturally tend to

increase in weight when formal employment conditions are poor and when there is high unemployment and a high degree of labour market instability.

3.1. The reallocation of labour across enterprises (the 'g' force)

Compelling evidence of a significant cross-sector reallocation of labour in the enterprise sector (the 'g' force) has not been found in previous sections while the state-private reallocation has been largely explained in terms of privatisation and of growth of self-employment rather than in terms of growth of a new private sector. However, before we accept the hypotheses that labour reallocation in enterprises has in fact not occurred or that the forces of change have not been working in the expected directions we may want to look at and try to make sense of a number of other elements including labour turnover in enterprises and the relationship between sectors performance, wages and productivity.

The classic evidence proposed to support the reallocation of labour argument is the high degree of hirings and separations observed throughout transitional economies. A high labour turnover is taken as an indication of a buoyant labour market and a healthy reallocation of labour. The CSAK provides data on employment and unemployment turnovers. In table 4.14 the share of arrivals (A), separations (L) and the difference between the two measures (D) is computed as a percentage of total employment for large and medium enterprises. It is shown that both arrivals and separations rates are high with separations rates offsetting arrivals rates, given the overall decline in employment. Also, turnover is generally high in all sectors and both hiring and separations seemed to increase during the period.

Table 4.14 – Employment turnover rates

		1992	1993	1994	1995	1996
Industry	*A*	17.2	23.7	21.6	21.9	22.7
	L	20.1	29.1	31.3	32	39.3
	D	-2.9	-5.4	-9.7	-10.1	-16.6
Agriculture and forestry	*A*		9.1	9.4	5.4	13.6
	L		10.9	15.5	9.8	27.6
	D		-1.8	-6.1	-4.4	-14.0
Construction	*A*	24.8	30.3	27.7	31.6	30.8
	L	30.2	38.6	46.3	48.5	58.6
	D	-5.4	-8.3	-18.6	-16.9	-27.8
Transport and communication	*A*	14.5	14.6	15	13.6	21.6
	L	21.8	30	27.1	26.1	34.3
	D	-7.3	-15.4	-12.1	-12.5	-12.7
Trade, catering and procurement	*A*	16.4	26.6	27.3	37.2	32.2
	L	29	36.2	43.2	61.5	70.6
	D	-12.6	-9.6	-15.9	-24.3	-38.4
Health, Physical culture and social insurance	*A*		18.1	21.8	19.5	17.2
	L		16.1	24.9	21.5	26.1
	D		2	-3.1	-2	-8.8
Science and scientific services	*A*		25.2	23.2	19.5	19.4
	L		31.4	27.4	26.8	29.4
	D		-6.2	-4.2	-7.3	-10
Credit and insurance	*A*		17.1	21.2	19.6	27.9
	L		12.9	27.8	26	41.9
	D		4.2	-6.6	-6.4	-14.0
Total	*A*	18.2	18.5	17.8	23.4	15.0
	L	24	23.6	26.5	35.5	27.0
	D	-5.8	-5.1	-8.7	-12.1	-12.0

Source: De Broeck and Kostial (1998) and Cis-Stat (1998); A=Arrivals, L=separations, D=Difference (Arrivals-Separations)

A closer inspection reveals that there is not a visible relation between turnover level and sectors' output. The correlation coefficient calculated across sectors and between 1992 and 1996 gives a negative value of -0.4502[26]. Sectors with bad records such as industry and construction have very high turnover rates as well as the best performing sector, credit and insurance. This is a feature similar to what has been observed in Russia. Kupriyanova (1997)[27] noticed that the incidence of changes in professional status is lower in areas that have performed relatively better such as in Moscow and St.Petersburg (p.14).

[26] The correlation index is: $\rho_{x,y=\frac{\mathrm{cov}(X,Y)}{\sigma_x \bullet \sigma_y}}$, where x is annual changes in output by sector and y is the turnover rate.

[27] Quoted in Clarke and Donova (1999), p.14, note 24

Moreover, from labour turnover rates, it is not possible to know whether high figures are due to workers moving across sectors, within sectors or even within the same enterprises. Piecing together the available evidence, it seems that a large portion of the turnover is explained by workers who are in fact not moving across sectors. For many enterprises defensive restructuring meant an internal reorganisation of labour with movements of workers within the enterprise. Clarke and Donova (1999) well documented this form of internal reallocation in Russia and explained how workers have been willing to move across shops, occupations and hierarchy to maintain their employment and how internal mobility has increased during the transitional period (p.6).

In other cases, workers leave their occupation during production downturns only to come back when work picks up again. Relevant output swings have been documented in chapter 3. This may well be the case, for instance, in the construction sector, where work is sporadic and workers are hired on a temporary basis to accomplish piece works. Indeed construction is the single sector with the highest turnover while being the single sector with the largest output and employment decline. In other cases, enterprises waiting for input deliveries send workers home for indefinite time only to recall them when inputs are available and production can be reactivated. It is also the case that many new enterprises are simply spin-offs of old ones. Enterprises are split in smaller production units or reorganised with different lay outs and departments. Often, when these types of restructuring occur, contracts are re-signed with the new entity and this appears in statistics as new hirings and separations.

An additional significant factor in explaining labour turnover is migration. It was shown in the population section that both emigration and immigration have been very significant phenomena. Immigrants have been mostly ethnic Kazakhs living abroad encouraged to return by housing schemes specifically tailored for re-entrants and by job opportunities left vacant by Slavic emigrants. Thus these are probably the same jobs changing hands from ethnic Slavs to ethnic Kazakhs.

A less important factor may have been the growth of private employment. Gimpelson and Lippoldt (1998) documented that employment in the Russian private sector shows higher turnover and greater employment fragility than employment in the state sector. We don't have evidence to support this claim in Kazakhstan and this factor can only have played a marginal role given the limited growth of employment in truly private enterprises. In conclusion, the observed high labour turnovers seem to be a symptom of poor employment conditions rather than of a healthy reallocation of labour. Such employment fragility carries a high degree of insecurity and instability which is very much in line with what was documented in the underemployment section.

Did entities that changed ownership away from state ownership offer better opportunities and have they been able to attract workers? Trade and catering, the single sector which has been able to attract a large number of workers has also the highest share of workers working for non-state entities. However, measuring the cross-sector correlation between the change in non-state ownership and output across sectors and during the period 1991-1996 suggests that sectors which managed to increase non-state ownership significantly have also performed relatively worse. The correlation is highly negative whether we consider all sectors or we exclude trade and catering as table 4.15 shows[28]. More dubious is the correlation between changes in non-state ownership and employment. This seems slightly positive all sectors considered, and negative if trade and catering is excluded. These numbers should be treated with caution because the time series are short and because most of the change in ownership happened when most of the output and employment changes already occurred (chapter 3). However, at least from these macro data, the change in ownership does not appear to be positively and significantly correlated with either output or employment.

[28] The sectors considered are: Industry, Construction, Agriculture and Forestry, Transport and Communication, Trade and Catering, Housing and Public utilities, Education, Culture and Arts, Science and Scientific services, Credit and Insurance, General administration. These were the sectors for which the full set of data was available. The correlation coefficient is as in note 26 and is calculated on annual changes in employment or output against annual changes in non-state ownership.

Table 4.15 – Cross-sector correlation between non-state ownership (NS), output (O) and employment (E), (1991-1996)

	NS-E	NS-O
With T&C	0.07798	-0.61738
Without T&C	-0.19739	-0.63645

Source: Estimated from CIS-Stat (1998) and CSAK (1997a)

Did real wages changed in line with productivity? With employment declining less than output, enterprises in Kazakhstan experienced a fall in productivity. During the same period, real wages declined and it is natural to argue that enterprises opted to maintain labour in exchange of lower real wages. What, however, is less clear is the scale of the different declines. If we compute productivity as a simple ratio between output and employment, we observe a decline of about 22% between 1991 and 1996 (table 4.16). Other conditions being equal, this decline should have been reflected in a similar decline in real wages. Instead, real wages declined much more. Deflating wages is not a simple matter given the size of inflation and the introduction of the national currency in 1993 but the deeper decline in wages as compared to output per worker is evident however we deflate wages.[29]

Table 4.16 - Output, employment and wages

	1991	1992	1993	1994	1995	1996
Output	100	97.0	87.0	71.5	65.2	65.9
Employment	100	98.1	89.8	85.3	84.9	84.5
Output/Employment	100	98.8	96.9	83.8	76.8	78.0
Real consumer wages	100	45.7	38.7	37.5	40.6	39.9

Source: Calculated from Cis-Stat (1998)

One reason which may explain such a fall in real wages is that, as noted in chapter 3, Kazakhstan entered the transitional period with large endowments of both capital and labour. Therefore, part of the fall in real wages may be explained as an 'overhanging' labour hoarding from previous periods. Yet, as large as this

[29] For a discussion on price indexes in Central Asia see Koen (1997) while De Broeck, De Masi and Koen (1995) discuss inflation in Kazakhstan. There is a variety of price indexes and methods one could use to deflate wages and I found results to be quite sensitive on the choice. In table 4.16, I used the CSAK official annual Consumer Price Index (CPI).

overhanging labour hoarding may have been, the fall in wages is still not fully explained and it seems plausible to argue that wages have been simply slow in catching up with inflation. The inflationary peak was in January 1992 and by the end of that year most of the wage devaluation had occurred. Since then, output continued to decline and unemployment has been growing steadily thus explaining why wages have not been able to re-gain the pre-1992 value.

Table 4.17 shows changes in output, employment, productivity and relative wages across ten sectors. The decline in productivity is visible in most sectors, but the size and sign of the changes occurred between 1990 and 1996 is very different across sectors. Industry, construction, agriculture, transport and communication and trade and catering show the largest falls. All other sectors show either a proportional decline of both output and employment or, as in the cases of housing and public utilities and general administration, a relative large decline in employment vis-à-vis output and a consequent increase in productivity.

Did sectors changes in relative wages followed changes in sector productivity? The apparent behaviour is quite contrary to what one may have expected during a process of transition. There seems to be an inverse correlation between productivity and relative wages. The correlation index calculated between annual changes in productivity and relative wages across all sectors and years gives a value of -0.25.

It should be noted that wages are contractual wages and do not necessarily correspond to what workers effectively get at the end of the month. Also, the wages observed are those reported in formal questionnaires sent to enterprises by the national statistical agency. The picture may be different if all real and paid wages could be observed. Nonetheless, economic sectors that aim at attracting the best workers should be able to formally offer on the labour market contractual wages higher than other sectors and the fact that this is not visible should not be dismissed simply on the ground that what is not observed is necessarily different from what is observed. Perhaps the high level of aggregation used does not allow detecting the reallocation of labour and relative wages accurately, but when we

considered output of single products in chapter 3 this seemed to behave fairly consistently within sectors. Also, generally speaking, wages tend to be more homogeneous within economic sectors than across sectors because of the nature of national contractual agreements and the sector specificity of skills, professions and productivity. Wage dispersion across sectors increased during the period as it is shown by the standard deviation calculated for relative wages (table 4.17).

In conclusion, neither a reallocation of labour across enterprises nor a real reallocation of labour from state to new private enterprises is visible in Kazakhstan. In fact non-state ownership does not seem to be positively correlated with output and real or relative wages did not change in line with productivity, as one would have expected during a reallocation of labour from depressed to growing sectors. In other words, the labour market does not seem to have functioned as labour economics would suggest.

Table 4.17 – Total employment (E), output (O), productivity (O/E) and relative wages (RW)

		1990	1991	1992	1993	1994	1995	1996
Industry	E	100	101	98	85	78	71	69
	O	100	100	83	72	52	47	48
	O/E	100	99	85	84	67	67	69
	RW	100	113	125	125	149	148	135
Construction	E	100	88	86	68	53	40	34
	O	100	89	53	39	33	20	16
	O/E	100	101	62	57	62	51	47
	RW	100	102	108	113	127	130	115
Agriculture and forestry	E	100	109	112	102	82	84	88
	O	100	77	100	93	73	55	53
	O/E	100	71	89	91	89	66	60
	RW	100	85	92	81	58	47	49
Transport and Comm.	E	100	96	93	64	78	72	70
	O	100	94	77	66	50	45	41
	O/E	100	99	82	103	64	63	59
	RW	100	104	107	120	126	136	140
Trade and catering	E	100	103	98	86	151	184	247
	O	100	99	82	76	63	67	77
	O/E	100	96	83	89	42	36	31
	RW	100	106	96	109	103	101	106
Housing and public utilities	E	100	86	79	97	92	94	74
	O	100	103	104	101	101	106	105
	O/E	100	119	130	105	109	113	141
	RW	100	106	103	112	130	80	127
Education, culture and art	E	100	92	85	94	89	88	77
	O	100	103	99	96	92	91	88
	O/E	100	113	116	101	104	103	115
	RW	100	109	77	92	76	86	105
Science and scientific services	E	100	89	90	32	28	27	26
	O	100	95	80	70	35	34	29
	O/E	100	107	90	221	126	124	113
	RW	100	95	86	80	72	81	83
Credit and insurance	E	100	108	126	138	126	128	110
	O	100	107	117	134	125	121	110
	O/E	100	100	93	97	99	95	99
	RW	100	138	150	201	186	174	144
General administration	E	100	107	117	116	95	95	93
	O	100	113	125	130	143	144	145
	O/E	100	105	107	112	150	151	157
	RW	100	85	87	94	84	75	96
Relative wages Stand. Dev.(*)		**23.5**	**29.8**	**39.6**	**53.0**	**54.5**	**53.1**	**39.2**

Source: Calculated from CSAK (1997a), CIS-Stat (1998)
(*)Calculated on relative wages not adjusted to base year (not in table)

3.2. Frictions and obstacles to the reallocation of labour across enterprises

Thus, neither a genuine reallocation across sectors and enterprises seem to have occurred nor variables such as wages and productivity have changed in the expected directions. It is sensible therefore to turn to those factors that may have hampered such processes such as labour market rigidities.

The minimum wage, which existed in Kazakhstan throughout the period, has been too low to discourage firms from hiring and workers from leaving. The minimum wage has been consistently below 27% of the average wage, touching 5.5% in 1995 (table 4.18). In 1996, the minimum wage was significantly less than the value of the minimum consumption basket and below unemployment benefits (see below). Given the depreciation of wages, it is unlikely that the minimum wage had any meaning for workers and certainly did not discourage firms from hiring. Moreover, with significant wage arrears, it is not the difference between wage and minimum wage that matters to workers but the actual cash they get at the end of the month.

The reservation wage represented by unemployment benefits has also been rather low but, more importantly, it reached only a small number of the unemployed. Unemployment benefits, according to legislation, were tied to the value of the minimum wage and remained low accordingly. At the end of 1996, the average unemployment benefit was 2,215 Tenge (30 USD), slightly higher than the formal minimum wage but less than half of the estimated subsistence wage (64 USD)[30] and about one third of the average wage. This value is similar to what has been reported for CEE economies in 1995 (Commander and Tolstopiatenko 1997) and is not insignificant if compared with the actual wage received by workers on average (1996 KLSMS). However, the number of people on benefits is so low that unemployment benefits are unlikely to influence labour market dynamics on the

[30] Estimated by the trade union federation in 1996.

whole. In 1996, and according to the KLSMS, only 10.7% of the unemployed (U3) were receiving benefits[31].

Table 4.18 - Monthly nominal wages and pensions (annual averages)

	1991*	1992*	1993	1994	1995	1996
Minimum wage	115	589	13	122	262	1550
% Av. wage	*26.1*	*12.7*	*10.2*	*7.1*	*5.5*	*23.0*
Average pension	187	2237	122	998	1876	3283
% Av. wage	*42.4*	*48.4*	*96.1*	*57.8*	*39.2*	*48.8*
Average wage	441	4625	127	1728	4786	6730
	100	*100*	*100*	*100*	*100*	*100*

Source : UNDP (1997), IBRD (1996), EU (1997); (*) Rubles

The question of whether benefits and services provided by enterprises represented a real disincentive to reallocation is disputable. Commander and Schankerman (1997. p.4) have argued that in former Soviet enterprises benefits remained a substantial component of total compensation[32]. On the whole, social protection expenditure in Kazakhstan has declined from 11.2% to 7.9% of GDP between 1992 and 1997 (Murthy, Pradhan and Scott 1998, p.25) which translates into a decline of about two thirds in real expenditure. The provision of social protection benefits has shifted away from enterprises and towards local administrations which determined a deterioration in the capacity of enterprises to compensate workers with non-cash benefits. According to the 1996 KLSMS, only 2.7% of respondents who were asked if they received any subsidy (children care, pre-school institutions, medical services, housing, transportation, etc,) from their enterprise during the 30 days before the interview said to have received any sum in cash or kind. This seems a rather small share to have had any impact on overall job retention in 1996, though the general argument was probably valid in the early years of transition.

Trade unions are generally of two forms, the trade unions heritage of the Soviet system and the new independent trade unions. None of these is currently a serious

[31] Calculated from table 4.10

[32] The authors observe only the share of enterprises still providing benefits in two rather small enterprises surveys where questions were addressed to management rather than workers. Therefore the actual decline in benefits effectively provided to workers is not observed.

candidate to claim responsibility for employment rigidities. The first were in substance an additional state institution meant to voice workers needs and manage different services such as recreational activities. These had little say in wage determination and often did not speak for the workers but for the management (OECD 1995, p.12). The new independent trade unions are instead still very small, poorly organised and certainly not powerful enough to reach tripartite negotiations and influence wage setting, except occasionally when strikes are organised in critical sectors such as mining or transport[33].

Residency restrictions, the housing market and transport costs are instead real potential frictions in the labour market. Residency restrictions and mobility rules and regulations have been removed to some extent but having a registered residency is a strict requirement for accessing all sorts of state benefits, including unemployment benefits. Housing is no longer the legal entitlement it used to be. Generally speaking, households have been given the right to purchase the property in which they lived for a nominal sum. Many families took this opportunity though others have not because of the costs attached to ownership such as maintenance of common grounds or local taxes. Non-state rents are high, generally more than the average wage, and workers move to other regions if they have relatives or friends capable of offering shelter. Distances across regions and transport costs are often prohibitive for temporary migrant labour given that the country is almost eleven times the size of the UK.

Regional mismatches can be an asset in times of reallocation as they provide incentives for mobility while skills mismatches across regions can undermine this force. Regions were highly specialised during the Soviet times and remained so in the aftermath. The 'virgin lands' regions of Southern Siberia (North of Kazakhstan) specialised in agriculture, most of the other northern regions specialised in heavy industry or mining, one region relied on the Baikonur space programme, another on the nuclear industry, the southern regions relied more on

[33] Lines (1995) supports this argument in describing public services trade unions in Central Asia. Strikes, including hunger strikes, have been reported by local media in several occasions

commerce and husbandry. Regional disparities have been increasing during the transitional period partly because the different output declines in the different sectors have been reflected on the regions and partly because regions applied transitional reforms unevenly. At the same time, such regional disparities are strictly intertwined with skills disparities across regions. As the regions are rather specialised, the regional educational systems were often designed to supply local industries. Mining regions, for instance, trained miners as well as mineral engineers. Workers attracted by better pay in other regions are likely to have to change profession and qualifications which may be costly and time consuming, thus becoming an additional form of barrier to mobility.

Thus, certain classic potential sources of labour market frictions such as the minimum wage, unemployment benefits, trade unions and to a lesser extent social assistance provided by enterprises have not been identified as major obstacles to labour reallocation across enterprises and sectors. More important may have been factors such as residency restrictions, the housing market, distances and transport costs and skills mismatches. What it remains to be explained, however, is how mobility constraints might have affected selectively only the reallocation of labour across enterprises and industries. As it was shown in the population section, internal migration was estimated at 3.9m people while external migration was estimated at 4.5m people between 1990 and 1998. When real needs and real incentives exist people seem to find means to move.

3.3 The reallocation of labour from and to self-employment

The general picture emerging for Kazakhstan is that the labour market is rather flexible in terms of pay and rather segmented in terms of regions and economic sectors. This historical segmentation partly explains a low cross-sector mobility but the crux of the matter is that none of the sectors really managed to flourish and pull workers out of other sectors, except for trade and catering. This last sector attracted a substantial number of workers without showing a particular good

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particularly in mining areas, but these were a reaction to wage arrears rather than an organised

record in output, wages or productivity. Wage differentials and regional and sectoral segmentation cannot explain why so many workers have been pouring into trade and catering and self-employment. So, what can explain such a reallocation of labour?

An alternative option is to think about an economy divided into a wage and non wage sectors constituted by employees and self-employed respectively as it was proposed in chapter 2. If a non-wage sector exists that offers income opportunities similar to the wage sector, workers may be induced to move in and out the wage and non-wage sectors for a combination of non-wage reasons. In other words, the wage in paid employment is not perceived by workers as the main motive for mobility. Moreover, if the non-wage sector is associated with a particular sector of the economy, changes in this sector are incidentally induced by changes in the balance between wage and non-wage employment. This may explain the association between the growth of trade and catering and self-employment. It is not trade and catering *per se* that attracts workers by performing better as a sector but the fact that this sector is structurally suited to host self-employment activities better than any other sector. Self-employment is what workers may be seeking as a defensive mechanism in times of acute recessions.

This may well be one of the missing pieces of the enigma. Chart 4.1 depicts a non-parametric density function (kernel) of the natural logarithm of total income for the employees and the self-employed respectively. The two distributions almost overlap suggesting that it is unlikely that the wage determined such a migration of workers from one status to the other. The two distributions are also very 'compressed' around the mode. If we exclude those workers whose income is zero (the left tail in the chart), the average income for the employees (state and private) was 6527 tenge as compared to an average of 6278 for the self-employed.

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wage negotiating measure.

Chart 4.1 – Income distributions for the employees and self-employed

Source: 1996 KLSMS; Kernel estimates using a Epanechnikov function[34]

4. Summary and conclusions

The picture presented for the labour market in Kazakhstan is one of a deeply depressed labour market. The demographic shock, the employment decline across sectors, the severe underemployment and unemployment are all elements which confirm that the recession experienced by Kazakhstan between 1990 and 1996 has been fully reflected onto the labour market. The only single relevant phenomenon that occurred is the reallocation from various sectors of the economy to trade and catering in the form of self-employment. In such an environment the relations between output, employment, productivity and relative wages are upset and confused and do not offer a valuable tool to analyse and explain labour market dynamics.

Cross-sector labour reallocation as initially imagined from depressed to healthy sectors is not visible as almost all sectors are depressed. Nor it is visible a

[34] See Greene (1997, p.904)

reallocation from sectors which have suffered more to sectors which have suffered less. A significant labour turnover in enterprises has been observed but mainly determined by workers entering and exiting the same economic sectors or moving from various sectors of the economy to trade and catering as self-employed. A very large number became unemployed, though less than one third register at employment offices. There has been also a certain 'osmosis' between unemployment and economic inactivity so that unemployment at times grows because of a reflux from the economically inactive pool. Therefore, in the labour market observed, the size of the unemployment pool has been partly determined by the inflow and outflow from the economically inactive pool and partly by the capacity of trade and catering to 'create' self-employment opportunities. These are elements that do not normally enter labour market models of unemployment.

There is virtually a vacuum in the transitional literature when it comes to explain the flow into self-employment and conventional labour economics instruments seem in a weak position to explain this form of reallocation in Kazakhstan. This calls for a reconsideration of the labour market using a different framework of analysis adapted to recessional and transitional labour markets dynamics with self-employment as the focus of attention. One proposed framework is the wage-non-wage framework which allows to better isolate the formal wage and consider its relevance for labour mobility.

The questions which arise in such a context are: a) how relevant is the wage in explaining the reallocation of labour; b) what are those non-wage elements which determine the reallocation from wage to non-wage employment and c) whether this is a free choice - i.e. workers are pulled in non-wage employment - or, rather it is a forced decision - i.e. workers are pushed into this sector. Moreover, when non-wage factors gain relatively to wage factors in workers' participation decisions, economic inactivity becomes an additional sector that may compete for labour time and that, at least for some workers, should be looked at as a possible and viable alternative choice. These are some of the themes explored in the next chapter.

CHAPTER 5

LABOUR SUPPLY[1]

This chapter compares the individual, household and location characteristics of private employees, the self-employed, the unemployed and the economically inactive found by the 1996 Living Standards Measurement Survey. The purpose is to understand whether the process of transition has determined a clear sector specific pattern in the reallocation of labour from the state sector to the three relatively new pools of private employees, self-employed and unemployed. An 'occupational choice' model is used to explore the determinants of sector participation[2].

1. Introduction

From the previous chapters we learnt that poor conditions in enterprises and a non-growth of a new private sector have facilitated the migration of a significant number of workers into self-employment. Taking a labour supply viewpoint, we want to see now the determinants of sector participation.

The study of sector participation has been applied in a wide variety of contexts but the branch of literature that comes closer to what is proposed in this chapter is the study of sector participation in developing countries. This started from the traditional framework of the 'dual' labour market hypothesis where the distinction between the two sectors has been either the urban/rural or the formal/informal one (Lewis 1954, Harris and Todaro 1970). More recently, using variants of a sector choice model initially developed by Roy (1951), these studies looked at more than two sectors testing at times for segmentation (Gindling 1991, Pradhan 1995,

[1] I am grateful to two anonymous referees for comments on an article version of this chapter.
[2] Occupational choice models fall into what Heckman (1993) calls labour supply models at the 'extensive' margin as opposed to labour supply choices at the 'intensive' margin concerning work-time.

Magnac 1991), sector ordering (Pradhan and van Soest 1995) or assessing search strategies (Fields 1989).

In a transitional context of the kind we have explored in chapters 3 and 4, a sector participation model seems best suited to continue maintaining the distinction between the state, private and self-employment sectors and explore further the determinants of sector participation. This is also an indirect way of looking at the determinants of the reallocation of labour critical to understand the direction that the process of transition is taking as well as an opportunity to test some of the assumptions of early transitional models.

In section 2, I present the empirical model derived from chapter 2. Section 3 presents data, variables and estimation methods. Section 4 presents the results separately for income and non-income factors. Section 5 concludes.

2. Empirical model

The underlying supply model is what it was presented in chapter 2. The empirical modelling implies the consideration of a latent variable Y_{ij}^* representing the expected utility for individual i choosing sector j:

$$Y_{ij}^* = \alpha_j' W_{ij}^* + \beta_j' K_{ij}^* + \varepsilon_{ij}$$

where W_{ij}^* is the potential or expected wage, K_{ij}^* is a 1xk vector of non-income variables influencing the individual's choice of sector j. α'_j and β'_j are the parameters to be estimated and ε_{ij} is the random component. At time t, the individual i will maximise the expected utility and, as a result, the sector choice is made. Y_{ij} is the utility associated with choice j at time $t+1$ that satisfies the condition $Y_{ij} > Y_{ik}$ for all other $k \neq j$. It is the situation *ex-post* decision that we are able to observe in the data.

Ex-ante, a well-informed worker is aware of the potential wage that each sector is willing to provide given K_{ij}*. The potential wage arising to worker *i* in sector *j* can be modelled as follows:

$$W_{ij}^{*} = \Omega_j R_{ij} + \mu_{ij}$$

where W_{ij}* is the potential wage, Ω_j are the parameters to be estimated, R_{ij} is a vector of explanatory variables and μ_{ij} is a normally distributed error term.

As explained in chapter 2, the choice of the sector (N_{ij}) is the outcome of both individual preferences and labour market rationing or, more explicitly, of the expected wage (W) and individual (Z), location (X) and household (H) characteristics. The estimation of the wage and participation equations can be done simultaneously or, alternatively, the expected wage can be estimated first and then it can be used as explanatory variable in a binary probabilistic sector participation model where '1' stands for participation and '0' stands for non-participation as follows:

$$w_{ij} = \lambda_j Z_{ij} + \beta_j X_{ij} + \nu_{1i} \qquad \textit{with } i = 1,\ldots\ldots,N \quad \textit{and } j = 1, 2, 3, 4$$

$$N_{ij} = \begin{cases} 1 - if(\gamma_j w_{ij} + \Phi_j Z_{ij} + \psi_j X_{ij} + \delta_j H_{ij} + \nu_{2i}) > 0 \\ 0 - otherwise \end{cases}$$

$$\begin{pmatrix} \nu_{1i} \\ \nu_{2i} \end{pmatrix} \sim N\left\{0, \begin{bmatrix} \sigma_{11}\sigma_{12} \\ \sigma_{21}\sigma_{22} \end{bmatrix}\right\}$$

Where N_{ij} is participation of worker *i* in sector *j*, w_{ij} is the expected wage accruing to worker *i* in sector *j*, X_{ij} is a vector of variables describing the status of the local economic and labour market conditions, Z_{ij} is a vector of personal characteristics such as age and education, H_{ij} is a vector of variables representing household responsibilities and characteristics, ν_{1i} and ν_{2i} are normally distributed error terms

and $\gamma_j, \Phi_j, \Psi_j, \beta_j, \delta_j$ and λ_j are parameters. Note that Z_{ij} and X_{ij} enter both the wage and sector selection equations. It is assumed that employers determine the wage according to the individual characteristics of the employee and the local economic conditions. Workers know how employers behave and estimate their expected wage accordingly. However, personal characteristics and the local economic conditions also affect workers' choice independently from the expected wage. For instance, a worker may expect a relatively good wage from private employment but chose self-employment because local transport between home and the enterprise is simply not available.

The model can be applied to both the private and self-employment sectors. The difference is that 'Z' entering the wage equation represents factors affecting employers' choices in the private sector and individual characteristics that affect productivity and profits in self-employment. The 'H' factor simply states that, if the recession affected family structures and assets, the impact is transmitted in the labour market via labour supply schedules. A decrease in birth rates, for instance, reduces the average family and increases the probability of women seeking private employment. An increase in divorces may have the same effect while an increase in male mortality turns some women into heads of households and pushes them to seek work. Household attributes affect labour supply choices in any context but what makes the transition case different is the magnitude in the changes of some of these attributes experienced over a very short period of time.

The estimation of the parameters in the model should give some indication of what factors are relevant in sector choice. The model also allows testing for segmentation by comparing incomes across sectors. Segmentation is defined as '*a situation where, because of institutional barriers to occupational mobility across sectors, a worker in the lower sector has less than full access to a job in the upper sector*' (Gindling 1991:585, see also Dickens and Lang 1985). With no barriers, workers move to the upper sector until wages are brought down to the level of the

lower sector. If segmentation exists differences in wages between sectors for identical workers should be observed[3].

In the case of transitional economies, with sectors supposedly developing at a different pace, we should expect the private sector to be in a position to chose and ration workers according to their personal characteristics. We should also expect the private sector to reward these personal characteristics with comparatively better wages than the state or the self-employment sectors (the efficiency wage argument). In other words, we should expect a certain degree of segmentation based on wages to exist as a fundamental feature of transition that would comply with transitional models. Therefore testing for segmentation is an implicit test of models predicting a two-tier sector development.

3. Data, variables and estimation methods

3.1. Sectors classification

Data are taken from the 1996 Kazakhstan Living Standards Measurement Survey (KLSMS)[4]. Five groups of individuals are considered in this chapter: State employees, private employees, self-employed, unemployed and economically inactive. The state sector is defined as all employees in state enterprises, public organisations and municipalities. Following the model, this sector does not hire but it is used as a reference sector for comparative purposes. Private employees have been defined as those who declared working for a private owner or company, including foreign companies. Following ILO recommendations[5], the self-employed are defined as the employers, own account workers, members of

[3] Testing segmentation only on the basis of wage differentials between sectors may be misleading. Heckman and Hotz (1986) warn that the estimated wage equations should be corrected for endogeneity of the selection in the sectors. Pradhan (1995) notes that such models do not allow distinguishing between wage differentials resulting from individual preferences for non-wage job characteristics and those resulting from restricted mobility between sectors. Magnac (1991) reminds that even if wage differentials across sectors exist these may be due to the fact that workers may have sector specific skills.

[4] Details of the survey are described in Annex.

[5] See ILO resolutions on employment, unemployment and economically inactive at http://www.ilo.org/public/english/120stat/res

producers' cooperatives and contributing family workers. However, given the heterogeneity of such classification, the self-employment sample was restricted to own account workers providing services, producing goods or trading. This allows self-employment to be reduced to a rather homogenous group that is also fairly representative of the category. The economically inactive were restricted to two categories: the discouraged unemployed, defined as those not employed who declared a wish to work, and housekeepers, defined as those not employed who declared to be housekeepers. No age restrictions were necessary. The five categories so defined include only adult individuals either already employed or not employed and able to work. Pensioners, students, disabled or ill are not included. This reduced the sample to 2,894 individuals (1669 state employees, 215 private employees, 256 self-employed, 365 unemployed, 165 discouraged unemployed and 224 housekeepers) of which only 1.3% were either below the age of 14 or above the age of 60.

The sectors' classification used here reflects two aspects. One is that the respondents determine what sector they belong to by ticking the category they feel best reflects the ownership structure of the employer. This may not coincide entirely with the true structure because employees may be badly informed. However, it reflects the information available to the supply side of the labour market and it is the supply decision we are concerned with in this chapter. The second aspect is that the private sector should reflect truly privately owned businesses and not mixed form of ownership that emerged from a 'nominal' process of privatisation. It is only by isolating workers who during the survey worked for fully private activities that we can observe whether these workers are substantially different or not. Therefore the private sector in this study is smaller than what administrative data report while the state sector is larger. The self-employed, defined according to the ILO definition, approximately reflect administrative estimates but the sub-sample selected for this study is smaller.

3.2. Income

Before estimating the expected income (w_{ij} in the model), it is necessary to discuss a number of issues related to the measurement of income in a country such as Kazakhstan and with the data available.

First, it was necessary to find a measure that could be used to compare the income of the employees with the income of the self-employed. The survey offers separate information for the two categories. Employees were asked about the formal wage (the contractual or official wage agreed between employer and employee) and paid income (the total amount of compensation, including salary, bonus, subsidy and allowance effectively paid by the enterprise to the employee during the 30 days previous to the interview). Instead, the self-employed were asked about the business cash-flow. The information on the self-employed producers of goods is on the cost of production, the information on traders is about the cost of purchases and the value of sales and the information on service providers is about earnings and costs. If we estimate income for the self-employed using this information we find negative values for those who have been 'stocking up' on supplies at the time of the survey. Information on yearly income is not available and we also do not know how the income reported in this way can be attributed to other family members, if these contributed to the business.

The only available alternative offered by the survey is to use a question that was addressed to all the employed, employees and self-employed alike. That is about all earnings including salary, bonus, profit, allowance, occasional earnings and other money income effectively paid during the 30 days before the interview took place (income henceforth). Comparing these responses with those on purchases and sales shows that the self-employed evaluated a sort of average income accruing to themselves as individuals rather than the business cash flow. This is perhaps not an optimal choice but the best allowed by the survey and also a recurrent practice in the literature on the informal and self-employment sectors in developing countries (Pradhan and van Soest 1995, Magnac 1991). The choice of

such question is also justified by the fact that wages are paid irregularly and employees value the occupation in relation to the various sources of earnings and benefits accruing at the end of the month rather than simply the wage. For the self-employed, income measured in this way better captures the different sources of earnings in one measure. Also, the fact that such question was addressed to both employees and self-employed renders the comparison between the two sectors easier.

Second, measuring income rather than wage for the employees presents some additional difficulties. I compared the formal wage with the income paid. In principle, the difference of the two measures should be explained by bonuses, profits and allowances. In practice, I found that income could be more, less or equal than the formal wage. If it is more, we could assume that the difference is explained by bonuses, profits and allowances but it could also be that arrears accumulated during previous months have been paid for some workers. The survey does not offer questions that would allow discriminating between the two effects.

Similar reasoning applies where income is equal or smaller than the formal wage. A smaller income may mean that respondents are suffering from partial wage arrears but also that they may have profited from enterprise assets for personal use at a cost agreed with the enterprise (this is not an uncommon practice in Kazakhstan) or, alternatively, that there is an informal agreement between employers and workers that wages are reduced during production slow-downs. There may be many different reasons explaining why paid income is equal or smaller than the formal wage and the survey does not allow to discriminate between the different reasons. This is a recurrent feature of the first World Bank living standards measurement surveys implemented in CIS countries because they were not designed to take specifically into account measurement issues related to these type of problems.

I use a feature of the data to correct, at least partially, for respondents paid less than the formal wage. In principle, the literature suggests to use the logarithm of hourly earnings as the dependent variable in the wage equations. I calculated hourly earnings using information provided in the time budget section of the survey. Respondents were asked how many hours were dedicated to work during the week previous to the interview. This allowed measuring the working time of the self-employed otherwise undetected in the questionnaire while again it offered the possibility to compare private employees and the self-employed making use of the same question. Unfortunately, using the time budget information a considerable number of observations were lost (9.1% for the private employees and 47.4% for the self-employed) because of non-respondents in the time budget section. Given that the sample we disposed of was already small, I needed to use as many income observations as possible.

In effect, the survey shows that 83% of the private employees respondents and 70% of the self-employed worked more than 35 hours during the week before the interview. Therefore the great majority are full-time workers. Moreover, I checked whether using income or income per hour would alter the results of the income equations and found that none of the explanatory variables changed either sign or significance for the private employees. For the self-employed I found one change of sign for a non-significant variable and the change from significant (in the income equation) to non-significant (in the income per hour equation) for the dummy of the young in age 14-25. This is a small difference that would not justify losing almost half of the income observations for the self-employed.

Therefore, I finally opted to use the logarithm of income rather than the income per hour. This also allows correcting partially for those who have been paid less than the formal wage. I simply assume that this group is the group that has been working less than full-time. This is not necessarily true (though likely) and also the two groups may not be of similar sizes but this seems the best option to cancel out in part two potential measurement errors. Finally, for those who have not been paid at all, I assume that the cause is wage arrears. This is a standard assumption

though again we cannot be certain that this is the case for the same reasons explained above. Income equations will be estimated with Ordinary Least Squares (OLS).

Measuring the expected wage (w_{ij}) presents additional problems. One is the usual selection bias problem (Gronau 1974) whereby the income observed in the data for one particular sector may not be representative of those who opted for other sectors. This problem can be treated with a Heckman selection model (Heckman 1976). In such model the wage and the participation equation are estimated simultaneously. The peculiarity is that the participation equation contains two sets of variables; the set used in the wage equation and a set of variables thought to determine whether the wage is observed or not. If the data are affected by selection bias the Heckman selection model should provide better estimates and the coefficients in the wage equation should be interpreted as representative of all workers.

The second form of selectivity bias may arise because of wage arrears. Some incomes are not observed because incomes have not been paid and the sample of the paid employees may not be representative of the non-paid. In our sample, 29.3% of state employees and 16.3% of private employees were not paid. Also, 4.9% of the self-employed did not produce any income (table 1). Given that the state sector is not a choice option and that wage arrears do not affect self-employment, I need to correct for this form of selectivity only for the private employees.

However, before treating wage arrears in the private sector, I compare graphically expected incomes in the three sectors (state, private and self-employment) under three different assumptions. This is done to see where the distributions of income in the private and self-employment sectors locate themselves vis-à-vis the distribution of income in the state sector and also to assess how different assumptions about expected incomes can lead to different results.

I assumed first that workers are not informed about arrears and compared formal wages in the different sectors (income for the self-employed). If workers do not know about the actual income paid, they make their choice on the basis of the wage that sectors offer on the market and the formal wage seems the best measure of such wage. Then I assumed that workers are perfectly informed and compared actual incomes. In this case workers know precisely the full income package actually paid by enterprises and take decisions accordingly. Next, I assumed that workers are only informed about wage arrears but not about other forms of compensation such as allowances or profits. In this case, I compared the formal wage multiplied by the probability of income being paid observed in the data (income times the probability of making an income for the self-employed). Results of these comparisons are presented graphically by means of a Kernel density distribution.

For wage arrears in the private sector, I first try to establish if the 'paid' group is significantly different from the 'non-paid' group. I do it by running a probit equation where '1' is assigned to the 'paid' group and '0' to the 'non-paid'. The explanatory variables are those used in the model, 'Z', 'X', and 'H'. I can identify in this way the significant variables determining the probability of being paid. If the two sub-samples are found to be significantly different, I could attempt to correct selectivity with a Heckman selection model using two sets of discriminatory variables, one for the wage arrears bias (the variables significant in the probit) and the other for the selectivity bias determined by non-choice of the sector (if different from the former set of variables). If, instead, the two sub-samples are not statistically different, than the selectivity bias determined by wage arrears is not an issue and I simply need to correct for the classic selection bias.

Table 1 shows the formal wage and income for the sectors considered. Income in self-employment is more regular across the sample with only 4.9% of incomes equal to zero as opposed to 16.3% in the private sector and 29.3% in the state sector. The average private formal wage is clearly larger than the state wage. The difference is still visible if we look at income while income for the self-employed

seems to position itself in between the state and private sectors. Using the logarithm of income or the logarithm of income per hour almost cancel the differences across sectors.

Table 1 – Income

	State	Private	Self-emp
Total no. of observations	1669	215	256
Formal wage (% of resp. in total obs.)	96.6	97.2	-
Income (% of resp. in total obs.)	95.7	97.2	96.5
Income>0 (% of income resp.)	70.7	83.7	95.1
Income=0 (% of income resp.)	29.3	16.3	4.9
Formal wage (monthly, average, tenge)	4952	7683	-
Standard deviation	*4239*	*7568*	-
Income (monthly, average, tenge)	4563	7367	6574
Standard deviation	*7670*	*12510*	*11013*
Ln of income	8.40	8.64	8.32
Standard deviation	*0.84*	*0.99*	*1.01*
Ln of income per hour	3.24	3.45	3.48
Standard deviation	*0.89*	*1.07*	*0.99*

Source 1996 KLSMS; 1 USD=72 tenge

3.3. Non-income variables

Following the model, the explanatory variables have been grouped in three categories: individual characteristics (Z), location attributes (X) and household related variables (H). 'Z' includes age in years, age years squared/100, a dummy for the youth in age 14-25 and years of education[6]. The youth dummy was thought necessary as it emerged that workers in age 14-25 suffer from higher unemployment and sector discrimination as compared to other age categories. 'X' includes the regional employment rate (meant to represent the local labour market conditions) and the regional average household consumption per capita (meant to

[6] Work experience was not included for different reasons. Specific questions on the employment history were not asked in the survey. The alternative was to calculate work experience as a difference between age and years of education but by 1996 many workers had experienced unemployment spills with consequent gaps in their employment history. Moreover, when in the trials the variable work experience (calculated as a difference between age and education) was used, either age or education were automatically dropped by the software for multicollinearity.

represent local economic welfare)[7]. 'H' includes a dummy for head of household and a variable for the number of children in the household (meant to represent the degree of household responsibilities), the natural logarithm of annual household consumption (meant to represent household welfare) and a dummy if the household owns a car (meant to represent an household asset that potentially influences the choice of the sector)[8]. During the trials with different variables representing household assets such as land or home ownership, car ownership persistently emerged as a critical variable for the participation in self-employment and unemployment and I decided to maintain this variable in the final choice.

Table 2 shows the descriptive statistics for the variables considered. As compared to the state sector, the private employees tend to be males, from urban areas, younger on average with a larger share of young adults while they show the same level of education on average. Perhaps because mainly urban, private employees also show to belong to families with less children. The self-employed do not show a gender bias while they are also more present in urban areas. They are on average as old as the private employees, less educated and belong to families with more children. The self-employed also show to be less likely to be head of household than the other two employment categories while they have the highest incidence of car ownership.

Both the unemployed and the discouraged unemployed show considerably lower average age, lower education, the incidence of head of households is much lower while they come from families with average number of children and they have a lower incidence of car ownership than any other category. These features are more marked among the discouraged unemployed than the unemployed. The

[7] Household consumption variables were calculated from the household section of the survey by the World Bank for a poverty study 'Kazakhstan: Living Standards During the Transition', Report No. 17520-KZ. I am grateful to Kinnon Scott at the World Bank for providing these variables.

[8] Car ownership may be endogenous to self-employment participation. It may be that traders are more likely to buy a car. However, the cost of a car is disproportionate when related to self-employment income and it is much more likely that those who had already a car in Soviet times were more likely to become self-employed. I checked this by comparing the year the car was bought with the age of the business and found that for 85.7% of the self-employed the car was older than the business. These are the people who own the old 'Giguli', trade in food commodities and offer lifts on the streets.

discouraged unemployed are also prevalently rural. Housekeepers seem to position themselves in between the employed and the unemployed being younger than the employed and less educated while they show the highest average number of children as one would expect.

Table 2 – Sectors' profile

	State	Private	Self-empl.	Unemp.	Disc. unem.	Housekeepers
Observations	1669	215	256	365	165	224
women (%)	53.3	37.2	49.8	52.2	49.1	100
urban (%)	56.5	78.1	66.0	50.7	33.1	48.9
age (average)	37.6	35.5	35.7	29.5	26.5	31.9
age 14-25 (%)	14.4	20.9	20.3	51.0	60.1	28.9
education (average, years)	12.2	12.2	11.5	11.2	10.8	11.0
head of HH (%)	46.8	47.0	44.9	21.6	17.8	11.1
number of children (average in HH)	1	0.8	1.0	0.9	0.8	1.6
respondents living in HH with car (%)	23.9	21.9	29.7	18.9	16.5	27.1

Source: 1996 KLSMS

Estimation of the participation equations will be done initially with a multinomial logit. This is the standard estimation method used in sector choice models (Schmidt and Strauss 1975, Pradhan and van Soest 1995) and allows comparing the different sectors relative to a base category which in our case is the state sector. Then, sectors are compared in pairs by means of probits and discriminating between males and females and urban and rural areas. First the private and self-employment sectors are compared to test differences of workers characteristics in the two sectors. Second, the private and self-employment sectors are compared in turn with unemployment. This is done to see how the two sectors ration workers given that the unemployed is the single group rationed by definition. Third, I compare the unemployed with the discouraged unemployed. This is to see what factors may determine seeking or non-seeking actively employment. Fourth, I compare females employed in the private and self-employment sectors with the housekeepers. This is done to explore females' employment participation and see if housekeeping is a hidden form of unemployment.

4. Results

I look at income and non-income factors determining the choice of the sector separately, except for the Heckman selection model where income and participation equations are estimated simultaneously. Given the generally poor quality of income data and given the results on income presented below, I chose to keep expected income out of the explanatory variables in the sector participation equations. This prevents poor income data from polluting non-income factors and restricting further the already small samples[9].

4.1. Income

The model assumes that the state sector is not really an employment option for workers in transition. Employment in the state sector is assumed to decline irreversibly. As indicated by the model, workers in the private and self-employment sectors come from the state sector and for this reason the state sector is best kept as a reference category.

The determinants for observed incomes are explored first using OLS estimations in table 3. For the state and private employees, the equations represent how employers *de facto* value workers' characteristics. For the self-employed, the equations represent the returns to self-employment activities based on individual characteristics. The state sector (column 1) pays comparatively lower incomes to women. Education increases income very slightly while living in urban areas makes a significant and large difference. Living in wealthier areas also seems to be a significant factor, though the effect is very small. For the private sector (column 2), the only significant factor that affects income seems to be living in urban areas. For self-employment (column 3), being a woman or very young are very important factors that reduce income while living in urban areas increases

[9] Initially during the trials I estimated predicted income for each working sector and then used it as explanatory variable in the sector participation equations (probits). Expected income appeared to be consistently non-significant. That is because the standard explanatory variables of income do not explain income variance as it will be shown further. Therefore using expected income in the participation equation does not add value to the equations.

significantly income as for the other sectors. A small positive effect is also visible for individuals living in wealthier areas[10].

Table 3 – Income equations

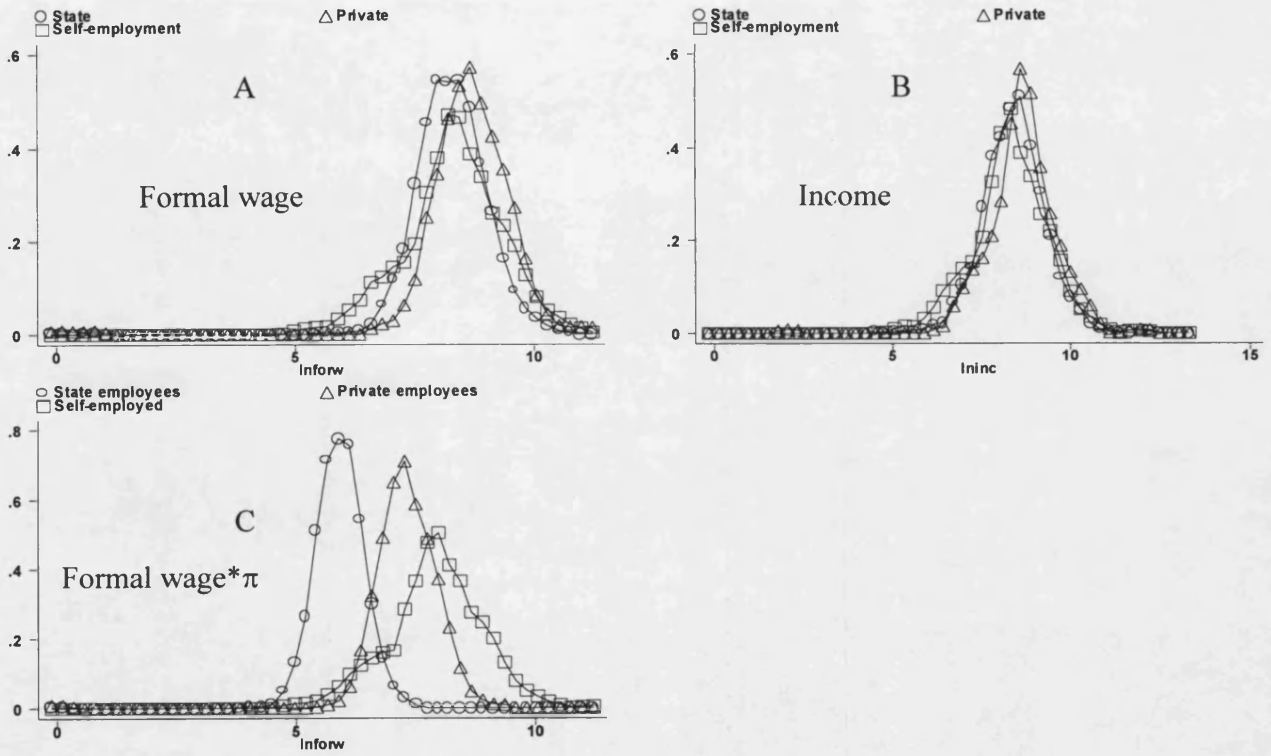
Dep. Var.: ln income	State	Private	Self-emp.
	(1)	(2)	(3)
women	-0.377	-0.266	-0.514
	(8.07)**	(1.76)	(4.08)**
age (years)	0.031	0.105	-0.040
	(1.91)	(1.63)	(1.49)
age squared/100	-0.040	-0.131	0.040
	(2.12)*	(1.73)	(1.38)
age14-25	-0.019	0.151	-0.539
	(0.17)	(0.43)	(2.35)*
education (years)	0.074	0.034	0.017
	(7.40)**	(1.02)	(0.70)
urban	0.415	0.835	0.294
	(8.56)**	(4.37)**	(2.12)*
regional employment rate	0.005	-0.017	-0.020
	(1.36)	(1.20)	(1.62)
regional average consumption per capita	0.005	0.009	0.014
	(2.25)*	(1.17)	(2.66)**
Constant	6.265	6.228	9.632
	(14.86)**	(3.91)**	(11.01)**
Observations	1128	175	234
R-squared	0.17	0.14	0.14

Absolute value of t-stat in parenthesis; * significant at 5% level; ** Significant at 1% level

Concerning expected income, the distributions of income in the state, private and self-employment sectors are compared first. Chart 5.1 shows such distributions using the logarithm of income or the logarithm of the formal wage under different assumptions. In figure 'A' the assumption is that workers are not informed about arrears. The distributions of the formal wages (income for the self-employed) show that the private sector offers on the market the best wages, followed by self-

[10] It would be better to treat urban and rural areas separately. However, table 2 showed that 78.1% of private employees and 66% of the self-employed were in urban areas. Given that income is zero for 16.3% of the private employees (table 1), the number of observations in rural areas for this group becomes excessively small. Chart 1 will offer an urban/rural income comparison across sectors which is allowed by the fact that a Kernel distribution can 'smoothen' data with few observations.

Chart 5.1 – Expected income under different assumptions (kernel distributions[11])



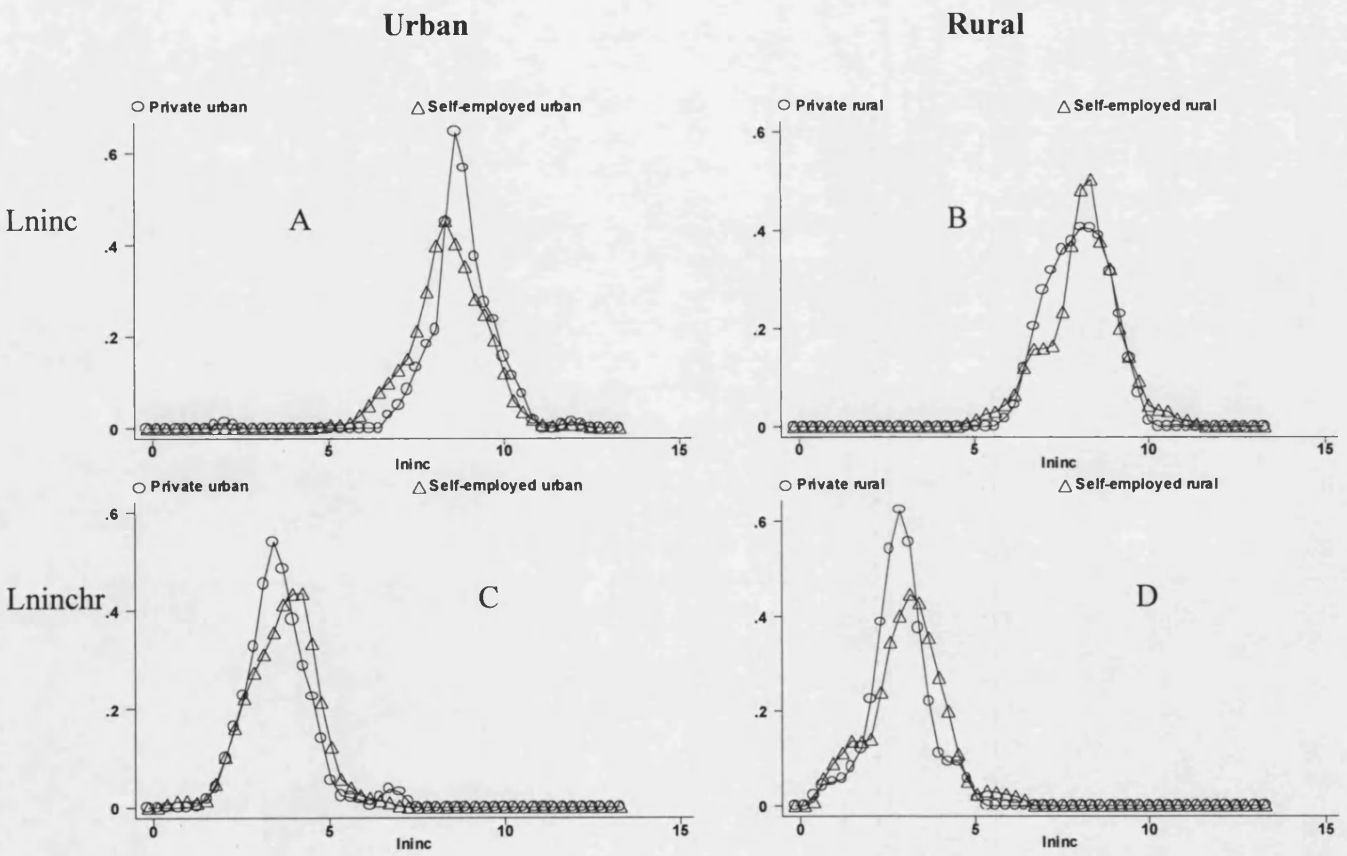
[11] Epanechnikov function: $K[z] = \begin{cases} \frac{3}{4}\left(1-\frac{1}{5}z^2\right) / \sqrt{5} if |z| < \sqrt{5} \\ '0' \; otherwise \end{cases}$. See stata manuals release 5, p.288-295 for details

employment and the state sector. In figure 'B', it is assumed that workers are perfectly informed about the total money package available in each sector and about wage arrears. The distributions of incomes show that there is no significant difference between the different sectors. In figure 'C' it is assumed that workers are only informed about total wage arrears and the formal wage is multiplied by the probability of income not being paid (π = 1 – percentage of income observed and not paid). In this case, the self-employment sector emerges as the best sector followed by the private and state sectors. In sum, if we assume that workers have a certain degree of information about wage arrears, then the self-employment sector appears as a potential competitor of the private sector.

I now take a closer look at private and self-employment income distributions. Chart 5.2 compares the distributions of income in the two sectors using kernel density estimates as before. The purpose is to see if there are major differences according to location and if using the logarithm of income rather than the logarithm of income per hour severely distorts the distributions. Incomes in the two sectors show very similar distributions irrespective of the choice of location or income (figures A, B, C and D). The private sector shows higher peaks around mode values and is slightly shifted to the right in urban areas (figure A). Equality of the distributions in figures A and B was tested with a Kolmogorov-Smirnov test[12]. The test suggests that, at least for urban areas, no major differences in the distributions of private and self-employment incomes are observable. Using the logarithm of income per hour rather than the logarithm of income (figures C and D) changes slightly frequencies around the mode but does not shift the

[12] The Null hypothesis is that one of the two distributions contains significantly smaller or larger values. The combined estimated differences between the two distributions were 0.2417 and 0.1363 while the corrected P-values were 0.000 and 0.742I for urban and rural areas respectively. The test is not very reliable for less than 50 observations which is the case for the number of private employees in rural areas (Chart 1, figure B, rural). See Stata release 5 reference manuals p.301-305 for details.

Chart 5.2 – Private and self-employment income (kernel distributions)



distributions. However, it comes with a substantial cost in terms of observations lost.

Next, I attempt to correct for selectivity bias in the private sector. In order to identify those variables that may determine wage arrears selectivity I run a probit equation for the state and private sectors giving a value of '1' to respondents whose incomes were observed and '0' to those whose income were zero (table 4). I did it separately for urban and rural areas using all Z, X and H variables as explanatory variables[13]. The state sector is not a choice option but it is kept as a reference as before. The latter shows that gender and location variables seem to be the relevant factors in explaining wage arrears with opposite signs in urban and rural areas (columns 1 and 2). Instead, for the private sector, none of the variables is significant in either urban or rural areas (column 3 and 4). I conclude that for the private employees the group with wage arrears is a random sample and that there is no need to correct for this type of bias.

For the selectivity bias determined by non-participation, I run a Heckman selection model for both the private and self-employment sectors using as discriminatory variables the location variables 'X' and the household variables 'H' (table 5). I assume that incomes may not be observed either because the individual lives in depressed areas where the private or self-employment sectors may not be an option or because individuals opted to stay in or out of these two sectors because of family related reasons[14].

[13] The 'H' variables are not thought to determine whether income is paid or not but they are used as conditional variables.

[14] The sample considered here are private employees, self-employed, unemployed and discouraged unemployed. For instance, for the Heckman model applied to the private employees and in the selection equation, I gave a value of '1' to the private sector and '0' to the other three sectors.

Table 4 – Paid Vs. Non-paid employees (Probit)

Dep. var Paid=1 Non-paid=0	State Urban (1)	State Rural (2)	Private Urban (3)	Private Rural (4)
women	-0.286	0.262	0.323	-0.565
	(2.73)**	(2.20)*	(1.04)	(0.81)
age (years)	0.038	0.007	-0.074	-0.334
	(1.00)	(0.19)	(0.53)	(0.79)
age squared/100	-0.021	-0.005	0.066	0.563
	(0.46)	(0.12)	(0.39)	(0.94)
age14-25	-0.103	0.021	-1.249	-1.181
	(0.45)	(0.09)	(1.68)	(0.66)
education (years)	0.022	0.001	-0.113	-0.028
	(0.99)	(0.04)	(1.62)	(0.13)
regional employment rate	0.021	-0.021	0.033	-0.168
	(2.53)*	(2.28)*	(1.24)	(1.39)
regional av. consumption/capita	-0.012	0.011	-0.010	0.047
	(2.97)**	(2.15)*	(0.74)	(0.90)
head of household	0.124	0.349	0.214	0.539
	(1.15)	(2.76)**	(0.61)	(0.76)
household number of children	-0.074	0.081	-0.340	-0.367
	(1.19)	(1.67)	(1.80)	(0.89)
ln annual household consump.	0.359	0.078	0.510	0.737
	(3.52)**	(0.82)	(1.64)	(1.09)
household owns a car	-0.043	0.094	0.445	-1.923
	(0.35)	(0.79)	(1.02)	(1.88)
Constant	-4.826	-0.546	-2.348	6.218
	(3.55)**	(0.41)	(0.54)	(0.53)
Observations	905	691	166	43

Absolute value of z-stat. in parenthesis; * significant at 5% level;
** Significant at 1% level

Table 5 – Income equations corrected for selectivity

Dep. var. = Ln of income	Private Income (1)	Private Sel. eq. (2)	Self-em Income (3)	Self-em Sel. eq. (4)
women	0.276	-0.536	-0.200	-0.189
	(1.52)	(5.33)**	(1.24)	(2.15)*
age (years)	0.002	0.073	-0.049	0.009
	(0.03)	(1.99)*	(1.45)	(0.39)
age squared/100	-0.021	-0.081	0.039	-0.002
	(0.27)	(1.89)	(1.07)	(0.07)
age14-25	0.091	0.017	-0.221	-0.292
	(0.25)	(0.08)	(0.78)	(1.65)
education (years)	-0.049	0.073	0.002	-0.008
	(1.32)	(3.27)**	(0.07)	(0.44)
urban	0.178	0.673	0.027	0.249
	(0.82)	(5.84)**	(0.16)	(2.69)**
regional employment rate		0.007		0.004
		(1.01)		(0.53)
regional av. consumption/capita		-0.001		0.000
		(0.31)		(0.12)
head of household		0.336		0.204
		(3.86)**		(2.26)*
household number of children		-0.006		0.077
		(0.11)		(1.84)
ln annual household consump.		0.361		0.239
		(5.07)**		(3.48)**
household owns a car		-0.134		0.188
		(1.39)		(2.18)*
Constant	10.911	-7.862	11.298	-4.018
	(7.32)**	(7.19)**	(12.77)**	(4.42)**
Observations	1222	1222	1222	1222
LR test	30.38		6.31	

Absolute value of z-stat. in parenthesis; * significant at 5% level; ** Significant at 1% level

The coefficients in the wage equations (columns 1 and 3) should be interpreted as if income was observed for all respondents. The Likelihood Ratio test (LR) of independent equations suggests that the use of the Heckman model is justified for both sectors, the private sector in particular[15]. As compared with the non-corrected equations in table 3, the explanatory variables in the income equations lose significance. The urban dummy in the private sector and the gender, youth and urban variables in the self-employment sectors are no longer significant. Therefore it appears that, once we correct for selectivity, the expected determinants of income do not explain variations in income any longer.

Instead, the selection equations (columns 2 and 4) seem to indicate that, in both sectors, women are less likely to participate while those living in urban areas, head of households and those living in wealthier households are more likely to participate. These factors have a greater effect for the private sectors than for self-employment. Private sector participation is also marginally more likely for the better educated which is not the case in self-employment. Instead, self-employment participation significantly increases if the household owns a car.

In substance, the private sector seems to offer better formal wages on the labour market but then pays as other sectors at the end of the month. Personal and location characteristics do not seem to explain variation in income.

4.2. Non-income factors

I start by comparing the private employees, self-employed, unemployed and discouraged unemployed using a multinomial logit (table 6)[16]. I do this separately for urban and rural areas. The base category is the state sector.

[15] Hp(0): Rho=0. The test compares the joint likelihood of an independent probit model for the selection equation and a regression model on the observed wage data against the Heckman model likelihood.

[16] In a multinomial logit model, the disturbances are assumed to be independent, identically distributed and homoscedastic. This implies the validity of the Independence of Irrelevant Alternatives (IIA) hypothesis. The IIA implies that the odds ratios calculated from a multinomial logit model for each sector considered are independent from the other sectors. If we add or remove one category this should not affect the relative risks of the regressors in the other categories. The

For the private sector (columns 1 and 5), whether urban or rural, the only significant variable is women with a large coefficient. No other variable distinguishes the private sector from the state sector relatively to other sectors. This would suggest that workers in the private sector are more similar to workers found in the state sector than those found in other sectors. This may be explained by the fact that workers in the two sectors are both employees as opposed to own account workers or unemployed (they may self-select themselves into wage employment according to personal characteristics). Or, more likely, the private sector is in fact a 'privatised' sector that is not significantly different from the state sector in terms of employees' characteristics.

The self-employed (columns 2 and 6) distinguish themselves for age and for education with education decreasing the likelihood of being in this sector as compared with the state sector in both urban and rural areas. In rural areas car ownership significantly increases participation in self-employment with a large coefficient.

IIA can be tested with a Hausman type specification test which, according to Hausman and Mc Fadden (1984), performs best with multinomial logit models. If the tests fail, the IIA hypothesis is rejected indicating that the sectors considered are not independent. On the samples considered, such test could not be carried out because small samples do not meet the asymptotic assumptions of the test. A multinomial probit model, where the error terms in the different equations for each sectors are correlated, could be a better choice than the multinomial logit but the computational difficulties are severe and most statistical packages do not offer such model as a standard routine.

Table 6 – Sector participation (Multinomial logit)

Dep. var.=State=1 Pr=2; Se=3; Un=4; Disc=5	Private Urban (1)	Self-emp Urban (2)	Unemp Urban (3)	Disc un Urban (4)	Private Rural (5)	Self-emp Rural (6)	Unemp Rural (7)	Disc un Rural (8)
women	-0.646	0.156	0.099	0.042	-0.816	-0.486	-0.273	-0.350
	(3.63)**	(0.89)	(0.56)	(0.14)	(2.20)*	(1.77)	(1.29)	(1.38)
age (years)	-0.002	-0.152	-0.197	-0.154	-0.025	-0.012	-0.155	-0.096
	(0.03)	(3.08)**	(4.08)**	(1.66)	(0.23)	(0.13)	(2.63)**	(1.23)
age squared/100	-0.023	0.163	0.203	0.113	-0.010	-0.013	0.174	0.037
	(0.28)	(3.00)**	(3.76)**	(0.95)	(0.07)	(0.11)	(2.33)*	(0.34)
age14-25	0.165	-0.414	0.178	0.007	-0.564	-0.226	0.903	0.620
	(0.40)	(1.09)	(0.50)	(0.01)	(0.83)	(0.44)	(2.46)*	(1.42)
education (years)	0.011	-0.130	-0.126	-0.123	-0.041	-0.155	-0.095	-0.187
	(0.30)	(3.50)**	(3.19)**	(1.83)	(0.59)	(3.06)**	(2.19)*	(3.64)**
reg. empl. rate	0.010	0.002	-0.027	0.002	-0.013	-0.033	-0.101	-0.129
	(0.66)	(0.11)	(1.87)	(0.08)	(0.51)	(1.51)	(6.23)**	(6.15)**
reg. av. cons/cap	-0.007	-0.003	0.020	-0.006	0.003	-0.020	0.032	0.020
	(0.98)	(0.43)	(2.71)**	(0.49)	(0.18)	(1.70)	(3.59)**	(1.81)
head of HH	-0.067	0.298	-0.434	-0.718	0.068	-0.555	-0.690	-0.442
	(0.36)	(1.60)	(2.07)*	(1.76)	(0.17)	(1.75)	(2.52)*	(1.26)
HH no. of children	-0.200	0.177	-0.153	-0.433	-0.099	-0.048	-0.046	-0.264
	(1.74)	(1.68)	(1.32)	(2.00)*	(0.61)	(0.41)	(0.49)	(2.13)*
ln annual HH cons.	0.211	0.050	-0.747	-0.620	0.321	-0.109	-0.439	-0.487
	(1.25)	(0.30)	(4.21)**	(2.05)*	(1.10)	(0.49)	(2.55)*	(2.32)*
HH owns car	-0.149	0.360	0.433	0.182	-0.478	0.664	-0.604	-0.347
	(0.71)	(1.80)	(2.06)*	(0.48)	(1.16)	(2.51)*	(2.25)*	(1.06)
Constant	-3.423	2.166	12.595	9.701	-3.398	4.840	11.805	14.917
	(1.46)	(1.00)	(5.88)**	(2.69)**	(0.84)	(1.57)	(5.27)**	(5.47)**
Observations	1515	1515	1515	1515	1149	1149	1149	1149

Absolute value of z-stat in parenthesis; * significant at 5% level; ** Significant at 1% level

For the unemployed (columns 3 and 7), most variables are significant in both urban and rural areas indicating that this is a group significantly different from all the others and finding difficult to access employment for rationing factors determined by both individual characteristics and location. Age is a significant factor in both urban and rural location. Being in age 14-25 significantly increases the probability of being unemployed in rural areas. Education, being head of household and living in wealthier families significantly decreases the probability of being unemployed in both urban and rural areas. Those living in wealthier areas are more likely to be unemployed. Interestingly, having a car increases the probability of being unemployed in urban areas and decreases it in rural areas. Perhaps a transport increases the probability of actively seeking jobs in urban areas while in rural areas a car is better suited for self-employment activities.

The discouraged unemployed (columns 4 and 8) seem to be so only for household related variables in urban areas while in rural areas poor education and poor local labour market conditions increase the probability of participating in this sector. In both urban and rural areas the larger the number of children in the household or the wealthier the household, the less likely a person is to be found in this category. Therefore the discouraged unemployed seem to be a less 'rationed group' as compared with the unemployed and this status seems more of a choice for those found in it, at least in urban areas.

Tables 7-11 show bilateral comparisons of the different sectors. This is assuming that workers have only two choices at the time and it is done to see more precisely how workers differ in the different groups. The comparisons are carried out separately for gender and type of location. This reduces significantly the number of observations per equation but it reflects more accurately the 'segmentation' observed so far between males and females and between urban and rural areas.

In table 7, the private employees are compared with the self-employed. Urban males (column 1) do not differ significantly for any of the variables considered.

Urban females (column 2) in the private sector tend to be more educated and live in households with less children than the self-employed counterparts. Rural males (column 3) are more likely to be private employees than self-employed if they live in relatively wealthier households and they tend to be much less likely to be in the private sector if they own a car. Rural females (column 4) do not appear to be significantly different between the two sectors[17]. Thus, the private employees seem to differ from the self-employed only for urban females and rural males, two rather small groups. Overall, household characteristics (H) seem to better explain participation than personal (Z) or location characteristics (X) as shown by the Chi squared calculated for the group of variables at the bottom of the table.

Table 7 – Private employees Vs. Self-employed (Probit)

Dep. var: Private=1 Self-empl=0	Urban Males (1)	Urban Females (2)	Rural Males (3)	Rural Females (4)
age (years)	0.08	-0.012	0.012	0.016
	(1.31)	(0.13)	(0.08)	(0.08)
age squared/100	-0.085	-0.018	-0.010	0.015
	(1.18)	(0.18)	(0.06)	(0.06)
age14-25	0.388	-0.302	-0.043	0.785
	(0.98)	(0.52)	(0.05)	(0.75)
education (years)	0.069	0.122	-0.113	0.126
	(1.77)	(2.34)*	(1.11)	(1.08)
reg. empl. rate	-0.002	-0.007	0.014	0.030
	(0.12)	(0.36)	(0.46)	(0.76)
reg. av. cons/cap	0.002	0.000	0.034	0.020
	(0.20)	(0.00)	(1.70)	(0.95)
head of HH	-0.285	0.049	0.820	0.025
	(1.24)	(0.20)	(1.81)	(0.05)
HH no. of children	-0.098	-0.424	-0.078	0.147
	(0.78)	(2.61)**	(0.38)	(0.51)
ln annual HH cons.	-0.044	0.240	0.668	0.051
	(0.23)	(1.13)	(2.08)*	(0.11)
HH owns car	-0.369	-0.183	-1.642	0.082
	(1.65)	(0.63)	(3.62)**	(0.16)
Constant	-1.620	-2.773	-9.017	-6.504
	(0.65)	(0.95)	(2.02)*	(0.95)
Observations	185	151	78	56
'Z' $\chi 2$	4.99	9.10*	1.32	1.68
'X' $\chi 2$	0.04	0.21	4.44	2.83
'H' $\chi 2$	6.91	10.82**	15.94**	0.31

Abs. value of z-stat in parenthesis; * sign. at 5% level; ** sign. at 1% level

[17] For rural areas the number of observations is rather small and results should be taken with caution.

Next, I compare the private and self-employment sectors with the group of unemployed (tables 8 and 9). The unemployed are those who have been 'rationed' as they are seeking work and cannot find it. Therefore comparing the employed with the unemployed should highlight what factors determine rationing[18]. In this case, the household characteristics are included only as control variables while we are interested in how employers discriminate the unemployed through the individual characteristics (Z) and how the local economic and labour market conditions (X) determine rationing.

Table 8 shows the probit estimates comparing private employees and the unemployed. For urban males (column 1), age and education seem to be important factors in excluding the unemployed from private employment. Workers in wealthier regions seem less likely to be in the private sector though the coefficient is very small. Private employees tend to be from wealthier families than the unemployed. For urban females (column 2), education and household wealth increase the probability of being in the private sector while the number of children decreases it. For rural males (column 3), only household wealth seems to make a difference while for rural females (column 4) a higher regional employment rate slightly increase the chances to be in private employment. Overall 'Z' factors seem to be more relevant than 'X' factors to explain rationing of the unemployed in the private sector and this phenomenon is more visible in urban areas and for males.

[18] This is similar to Pradhan (1995)

Table 8 – Private employees Vs. Unemployed (Probit)

Dep. var: Private=1 Unempl=0	Urban Males (1)	Urban Females (2)	Rural Males (3)	Rural Females (4)
age (years)	0.252	0.019	0.078	0.163
	(3.35)**	(0.15)	(0.56)	(0.94)
age squared/100	-0.267	-0.069	-0.133	-0.186
	(3.15)**	(0.47)	(0.80)	(0.85)
age14-25	0.822	-1.094	-1.174	0.245
	(1.66)	(1.71)	(1.62)	(0.24)
education (years)	0.110	0.190	0.043	0.043
	(2.36)*	(2.96)**	(0.53)	(0.40)
reg. empl. rate	0.034	-0.007	0.023	0.070
	(1.82)	(0.39)	(0.95)	(2.03)*
reg. av. cons/cap	-0.021	-0.007	0.020	-0.028
	(2.28)*	(0.70)	(1.13)	(1.51)
head of HH	-0.078	0.396	0.762	0.718
	(0.28)	(1.38)	(1.72)	(1.32)
HH no. of children	0.105	-0.411	-0.166	0.128
	(0.73)	(2.51)*	(0.90)	(0.58)
ln annual HH cons.	0.566	0.481	0.586	0.474
	(2.69)**	(2.19)*	(2.15)*	(1.29)
HH owns car	-0.444	-0.375	-0.642	0.289
	(1.76)	(1.22)	(1.33)	(0.57)
Constant	-13.327	-6.135	-10.569	-12.698
	(4.86)**	(1.94)	(2.43)*	(2.59)**
Observations	192	160	117	110
'Z' $\chi 2$	22.56**	16.59**	11.15**	4.31
'X' $\chi 2$	5.82*	1.31	3.74	4.20
'H' $\chi 2$	8.20*	18.09**	7.89*	3.90

Abs. value of z-stat in parenthesis; * sign. at 5% level; ** sign. at 1% level

Table 9 – Self-employment Vs. Unemployment (Probit)

Dep. var: Self-empl=1 Unempl=0	Urban Males (1)	Urban Females (2)	Rural Males (3)	Rural Females (4)
age (years)	0.077	0.019	0.020	0.165
	(1.65)	(0.41)	(0.19)	(1.38)
age squared/100	-0.087	-0.012	-0.029	-0.213
	(1.60)	(0.27)	(0.24)	(1.36)
age14-25	-0.255	-0.377	-1.183	-0.277
	(0.69)	(0.85)	(1.89)	(0.44)
education (years)	0.009	-0.017	0.017	-0.114
	(0.20)	(0.38)	(0.33)	(2.01)*
reg. empl. rate	0.033	0.012	0.024	0.056
	(1.82)	(0.63)	(1.02)	(2.22)*
reg. av. cons/cap	-0.014	-0.015	-0.028	-0.037
	(1.56)	(1.60)	(2.46)*	(2.92)**
head of HH	0.332	0.478	-0.561	0.996
	(1.27)	(2.12)*	(1.36)	(2.43)*
HH no. of children	0.248	0.172	0.069	0.113
	(1.71)	(1.29)	(0.50)	(0.69)
ln annual HH cons.	0.527	0.369	-0.046	0.534
	(2.51)*	(1.81)	(0.19)	(1.97)*
HH owns car	-0.044	-0.027	1.079	0.270
	(0.19)	(0.10)	(3.60)**	(0.71)
Constant	-8.654	-4.433	0.094	-9.383
	(3.40)**	(1.81)	(0.03)	(2.58)**
Observations	169	183	133	134
'Z' $\chi 2$	8.51*	6.58	10.59**	12.91**
'X' $\chi 2$	3.88	2.72	6.32**	8.79**
'H' $\chi 2$	11.86	10.01**	15.55**	9.88**

Abs. value of z-stat in parenthesis; * sign. at 5% level; ** sign. at 1% level

In table 9 self-employment and unemployment are compared. None of the rationing factors is significant for either urban males or urban females (columns 1 and 2). For rural males (column 3), wealthier regions seem to be associated with a reduced participation to self-employment. For rural females (column 4) education and living in wealthier regions seems to reduce participation in self-employment. Overall, self-employment does not seem to exclude the unemployed on the basis of rationing in urban areas, while this seems to be the case in rural areas due to both individual and location characteristics. As compared to the previous comparison between private employees and the self-employed, self-employment seems to be a sector 'closer' to unemployment and less discriminating, at least in urban areas.

Aside from the unemployed, the generally poor labour market conditions generated a group of discouraged unemployed, people wishing to work but thinking that seeking actively work would not lead to employment. In our sample this is a rather large group (table 2). Comparing the unemployed with the discouraged unemployed may give some indications of the reasons why some unemployed stop searching.

Table 10 reports the results. None of the 'Z' and 'X' variables seem to matter for any of the four groups except for regional wealth for urban males (column 1). For urban males (column 1), living in wealthier families decreases the probability of being unemployed. Household car ownership instead significantly increases the probability of seeking work for urban males. Probably having a means of transport reduces the cost and effort of seeking. Household related variables for urban males are really the only important factors in explaining the difference between the unemployed and the discouraged unemployed. Females seem to be very similar between the unemployed and the discouraged unemployed groups (columns 2 and 4). Given that the discouraged unemployed have been identified as those not employed who declared a wish to work, many of these females are probably looking after children though they expressed a wish to work and therefore would be better classified as housekeepers.

Table 10 – Unemployed Vs. Discouraged unemployed (Probit)

Dep. var: Unempl=1 Disc.unempl=0	Urban Males (1)	Urban Females (2)	Rural Males (3)	Rural Females (4)
age (years)	-0.175	-0.077	-0.011	-0.184
	(1.46)	(0.48)	(0.12)	(1.32)
age squared/100	0.206	0.146	0.054	0.295
	(1.44)	(0.71)	(0.45)	(1.41)
age14-25	-1.121	0.200	0.722	-0.216
	(1.35)	(0.26)	(1.19)	(0.36)
education (years)	-0.095	0.038	0.056	0.096
	(1.27)	(0.53)	(0.98)	(1.68)
reg. empl. rate	-0.040	-0.016	0.031	0.002
	(1.56)	(0.64)	(1.57)	(0.09)
reg. av. cons/cap	0.030	0.013	0.006	0.015
	(2.12)*	(1.03)	(0.56)	(1.36)
head of HH	-0.192	0.211	0.320	0.806
	(0.42)	(0.49)	(0.71)	(1.16)
HH no. of children	-0.008	0.432	-0.029	0.272
	(0.03)	(2.07)*	(0.26)	(2.06)*
ln annual HH cons.	-0.608	0.406	-0.158	0.120
	(2.19)*	(1.34)	(0.79)	(0.58)
HH owns car	1.327	-0.650	0.018	-0.436
	(2.82)**	(1.83)	(0.05)	(1.24)
Constant	12.457	-3.186	-1.386	-0.381
	(2.89)**	(0.88)	(0.50)	(0.11)
Observations	114	124	143	146
'Z' $\chi 2$	4.01	3.23	3.76	3.96
'X' $\chi 2$	4.61*	1.06	4.95*	2.88
'H' $\chi 2$	10.34**	7.69	1.10	7.33

Abs. value of z-stat in parenthesis; * sign. at 5% level; ** sign. at 1% level

Last in this series of comparisons, the housekeepers are compared with women in employment in the private and self-employment sectors (table 11). This should give some indications of whether housekeeping is a form of hidden unemployment and what factors limit women's access to employment. Education in urban areas is a significant factor increasing women's participation in both private and self-employment. Heading a family significantly increases participation in both sectors while the number of children significantly decreases it (columns 1 and 3). Overall, household factors predominate in explaining women's participation, as one would expect. It is noticeable that there is little difference between participation in the private and self-employment sectors in urban areas (columns 1 and 3). In rural areas, household factors do not seem to

affect significantly female participation in private employment[19] (column 2) while, for self-employment, household related variables are very important in determining female participation. These numbers suggest that a certain degree of rationing is present in urban areas in the form of screening (education) but that for the most part housekeeping is a choice determined by household characteristics.

Table 11 – Female employment Vs. Housekeeping (Probit)

Dep. var: Priv or self-emp=1 Housekeepers=0	Private Urban (1)	Private Rural (2)	Self-empl Urban (3)	Self-empl Rural (4)
age (years)	-0.111	0.090	-0.051	0.089
	(0.81)	(0.49)	(0.55)	(0.71)
age squared/100	0.147	-0.117	0.099	-0.135
	(0.85)	(0.49)	(0.87)	(0.83)
age14-25	-0.178	-0.167	0.126	-0.594
	(0.30)	(0.21)	(0.27)	(1.15)
education (years)	0.250	0.154	0.116	-0.026
	(4.07)**	(1.68)	(2.38)*	(0.49)
reg. empl. rate	-0.007	0.060	0.029	0.046
	(0.35)	(1.78)	(1.58)	(1.82)
reg. av. cons/cap	0.004	-0.005	-0.012	-0.024
	(0.42)	(0.29)	(1.45)	(1.95)
head of HH	0.805	0.831	0.878	0.999
	(2.91)**	(1.47)	(3.81)**	(2.49)*
HH no. of children	-0.698	-0.231	-0.277	-0.274
	(4.27)**	(1.21)	(2.11)*	(2.07)*
ln annual HH cons.	0.106	0.063	0.011	0.118
	(0.47)	(0.23)	(0.06)	(0.59)
HH owns car	-0.523	-0.250	-0.253	-0.326
	(1.80)	(0.61)	(1.10)	(1.05)
Constant	-1.776	-7.993	-2.135	-3.826
	(0.48)	(1.74)	(0.74)	(1.21)
Observations	174	131	197	155
'Z' $\chi 2$	17.01**	4.84	7.68	5.67
'X' $\chi 2$	0.21	4.52	2.95	4.31
'H' $\chi 2$	34.66**	5.23	23.86**	14.97**

Abs. value of z-stat in parenthesis; * sign. at 5% level; ** sign. at 1% level

[19] This may be due to the rather small sample.

5. Conclusion

The chapter compared income and workers in different sectors to see what factors characterise workers found in each sector.

Results on income illustrate some important features of the Kazakh labour market. The formal wage is significantly lower in the state sector as compared to the private sector. This difference persists when looking at average income (table 1). This reflects two phenomena with opposite effects. One is that the state sector pays more collateral benefits on top of the wage than the private sector, and the other is that the state sector has a larger share of wage arrears. Average income in self-employment situates itself in between the state and the private sector. The difference between the average of the logarithm of income across sectors is much reduced due to the larger variances of average income in the private and self-employment sectors and to the larger number of outliers. The state sector seems to be the only sector that values some of the individual characteristics of workers such as age and education. The variance of income in the private and self-employment sectors does not appear to be explained by personal characteristics (table 3). Neither the private nor the self-employment sectors seem to value the individual characteristics of workers, including the level of education. This would suggest that workers who exited the state sector and entered the private or self-employment sectors were not selected or self-selected on the basis of their personal characteristics.

Considering expected income under different assumptions, neither the private nor the self-employment sectors offer better income prospects overall. The two sectors show similar distributions in the logarithm of income, the private sector has an average higher income while, when we assume that workers are well informed about wage arrears, self-employment incomes show a better distribution. Therefore, if a selection mechanism exists in the choice between the private and self-employment sectors, it is more likely to be found among non-income factors, as the Heckman selection model suggested.

The state sector remains the most traditional sector in that theoretically rewards workers on the basis of their personal characteristics, is present in both urban and rural areas and does not discriminate between men and women. The private sector is instead a clear urban and male phenomenon (tables 2 and 6). Probably as a consequence of this factor, workers in this sector come from smaller and slightly wealthier families. Differences between workers found in the private and self-employment sectors seem to be in relation to education and the number of children for urban females and household wealth and car ownership for rural males. Urban males (the largest group in both sectors) do not differ significantly between the private and self-employment sectors. Therefore, difference in pay observed in the two sectors are hardly attributable to differences in personal characteristics of the workers.

Personal characteristics of workers seem to be a more important factor in explaining access for the unemployed to the different working sectors. The private sector seems more restrictive than the self-employment sector in this regard requiring younger and better educated workers than what the unemployment pool has to offer (tables 8 and 9). Therefore, the self-employment sector seems to locate itself in between the private sector and unemployment in terms of access for the unemployed. The discouraged unemployed, technically economically inactive, do not differ significantly from the unemployed suggesting that the flow of people in and out unemployment has also psychological determinants difficult to capture with available data.

Overall, the choice of the sector seems to be determined by 'rationing' due to location characteristics (X) and by 'preference' due to household characteristics (H). As predicted by the model in chapter 2, in times of transition and recession, non-income factors seem to gain importance relatively to wage and income factors in the choice of the sector. This implies that the reallocation of labour can be better understood moving from a wage to a more comprehensive income analysis and from income to non-income factors.

CHAPTER 6

LABOUR MARKET POLICIES AND THE FUTURE OF LABOUR

It is useful at this stage to take a step back and reconnect with the initial theme of this work about the differences observed in CEE and CIS countries. In particular, CEE countries have a relatively longer experience in labour market policies and a good look at this experience may help to better focus on labour market policies in Kazakhstan, their scope, meaning and effectiveness. Labour market policies are evaluated in the light of current macroeconomic conditions and a discussion on future prospects of labour and the economy is offered to conclude this work.

1. Introduction

Unemployment was a new condition in the early days of reforms and the obvious step was to look at how Western economies were dealing with the problem. As was the case with macroeconomic policies, the labour market policies popular in OECD countries in the early nineties influenced strongly the qualitative advice provided to transitional economies. Following the OECD model, transitional economies reformed the Employment Services (ES) and designed a range of Labour Market Policies (LMP).

The cause of unemployment in Western economies in the early nineties was (and still is) understood mainly in terms of labour market rigidities including regional and skills' mismatches, excessively high minimum wages, powerful trade unions, generous unemployment benefits and dear social contributions attached to the wage. Labour market policies had therefore a double role. On the one hand, they had to protect from destitution the unemployed on a human right ground, and, on the other hand, they had to contribute to reducing labour market rigidities by increasing skills on the supply side of the market, helping in matching supply and demand and preventing long-term unemployment.

Although unemployment in the CEE showed symptoms of rigidities from the early days of reforms, the very nature of unemployment was a large fall in output and production. A demand side phenomenon rather than a supply side. Skills had to be reoriented but the general level of education was exceptionally high in ex-Socialist countries by international standards. This inconsistency between the nature of unemployment and the response in terms of labour market policies did not seem to preoccupy policy makers in the early years of transition. Moreover, such inconsistency seems to increase moving East. Despite the deeper and more protracted recession in the CIS countries, the range of LMP has been generally smaller than in the CEE and declining, less experimental with innovative solutions and increasingly focused on few measures meant to reduce rigidities on the supply side. In effect, such trend has been partly determined by the fact that a larger fall in production meant a smaller employment fund and less choice when it comes to LMP.

2. Labour market policies in the CEE countries

Labour market policies are usually categorised as active or passive depending whether they actively endeavour to put people back into work or not. In the following sections, we look first at the institution of ES and then distinguish between labour supply policies, meaning LMP which target specifically the registered unemployed as a group, and labour demand policies, meaning those measures aimed at encouraging employment retention and/or generation from the production side. This alternative classification is better suited to highlight the contradiction between the nature of unemployment and its response outlined in the introduction.

2.1. The Employment Services

The most immediate response to the new emerging conditions in the labour market was the establishment (or, rather, the reform) of employment services

throughout countries and regions and the supply of unemployment benefits to a selected group of the unemployed. Labour market institutions had to be established to count and monitor the unemployed, and to design and implement policies.

The resources necessary to finance the ES and their activities have been secured through a form of taxation imposed on both workers and enterprises. A share of workers' wage bill and a corresponding contribution from the enterprise are levied and put into a special fund (the employment fund) which can be managed within the budget, though more often than not is extra-budgetary. The combined tax rate (workers + enterprise contribution) applied is variable, usually around 2-3% of the wage bill, with a peak of 7% in Bulgaria (Godfrey and Richards 1997).

Generally speaking, the total level of expenditure on active and passive employment measures in CEE countries as well as the distribution of this expenditure among different labour market programmes are similar to those of their neighbours in the West (Rutkowski, M. 1996). Approximately, between 0.3 and 3% of GDP is spent on such measures which is what OECD countries with comparable unemployment rates tend to devote to LMP. The greatest share of LMP expenditure still goes to passive measures (PLMP), unemployment benefits above all (Table 6.1).

Table 6.1 - Expenditure on LMP (% of GDP) and share of PLMP

	1992	1993	1994
Bulgaria	0.6	1.03	1
(% PLMP)	*83*	*82,6*	*80*
Czech Republic	0.39	0.3	0.3
(% PLMP)	*45,3*	*65,4*	*72*
Hungary	1.13	2.91	2.96
(% PLMP)	*79*	*77,4*	*71,3*
Poland	1.83	1.97	2.08
(% PLMP)	*93*	*87,3*	*86*

Source: Turunen (1997)
PLMP= Passive Labour Market Policies

ES seem to be understaffed as compared to their OECD counterparts. The ratios of registered unemployed or benefit claimants to employment services' staff are higher in the CEE than in Western Europe. Registered unemployed to ES staff range from 37 (Czech republic) to 600 (Romania) in the CEE (1993-1994) as compared to a range of 41 (Germany) to 370 (Italy) for Western Europe in the 1990s. The average was 159 for Western Europe and 265 for the CEE. A similar pattern is visible if benefits claimants are taken into account (Godfrey and Richards 1997). Therefore, the financial resources relative to the size of the economy seem generous and they are not over-utilised on excessive numbers of staff.

2.2. Labour supply policies

The range of policies adopted is generally comparable to those in OECD countries. Other than the four main activities (job brokering, unemployment compensation, re-training and public works), LMP targeting the registered unemployed include start-up business schemes, self-employment schemes and activities addressed to groups affected by higher unemployment such as women, the youth and the disabled. The general consensus and lesson from OECD countries is that active policies should be preferred to passive. Public works or start-up business schemes should be preferred to unemployment benefits.

The *job-brokering* function has become more difficult over the years. On the supply side of the market the increasing number of long-term unemployed and the prevalence of low skilled workers meant that ES found increasingly difficult to match these workers with vacancies. On the demand side, the process of privatisation and the general large supply of labour allowed many enterprises to 'by-pass' ES. Workers are often found at the enterprise's gate rather than in ES. Therefore, ES have progressively lost their capacity to match those workers and enterprises that are willing to use their services.

Unemployment benefits absorb most of the resources dedicated to LMP. That is because of the large number of unemployed rather than the cost per individual. In 1993 and 1994, the value of the average unemployment benefit in CEE countries was between 27% and 40% of the average gross wage (Godfrey 1996). Benefits should be a measure of last resort with the capacity of supporting financially a person in real need. Therefore, the value of the benefits should be low enough to discourage rent-seekers and high enough to guarantee subsistence. The search for this difficult balance is often cause of debate but it is usually recognised that unemployment benefits are low by any standards in transitional economies with a few exceptions such as the Czech republic.

Training became a necessary measure undertaken by ES. It is recognised that skills' mismatches exist and that they are partly a product of the very nature of transition. Indeed, training has become popular and, together with public works, this measure has been expanding in size over the years. However, it is costly, it is offered to a relatively small number of unemployed and helps mainly the unemployed with higher skills, those who are less at risk of not finding employment in the current labour markets. Also training is often seen as an alternative to benefits though it is said that this measure should be offered after a period of full-time job search (OECD 1996). This allows those who would find a job anyway to be matched, and it would allow for a larger share of the long-term unemployed to benefit.

Public works are popular and have been growing in importance in many countries. It is argued that these schemes pursue several objectives at the same time. They provide income maintenance and social inclusion, prevent loss of skills and motivation and contribute to socially useful projects. In the past, this measure has been a major policy tool of centralist governments undergoing severe recessions (Chile under Pinochet is a renowned successful example). On the other hand, it is a difficult policy to sustain financially and in the long-run alternatives have to be found, also to avoid creating a dependency culture on this type of income source.

Start-up subsidies for would be entrepreneurs are in use in several CEE countries and incentives for small businesses are indeed recognised as necessary. However, they have lost ground over the years and they are often hampered by hostile macro and micro conditions. A World Bank survey (1997) on business constraints around the world found that *'The highest obstacle according to businessmen in the Visegrad region is tax regulations and high taxes. This obstacle was considered as a very strong one by 76 percent of the respondents, compared to 46 percent for inflation, the obstacle ranked second. Corruption was ranked third followed by financing'*[1]. In Hungary, where start-up subsidies schemes have been adopted, in 1997 legislation raised the tax rate for the self-employed to 45% of the monthly income (Financial Times 19-2-97) thus undermining the possible gains of such schemes.

Policies aimed at increasing mobility such as housing policies, reduction of registration requirements such as residency permits and mobility subsidies have also been in use in CEE economies, though they are not always classified as LMP. Bulgaria, for instance, has adopted a mobility support programme for the unemployed which covers travel and removal costs for the families of the unemployed (Bobeva 1997). Labour mobility is indeed a serious constraint. Housing markets are still weak particularly in the low rent sphere as most people live in properties of their own. Transport costs are also on the increase and those

[1] Internet source; http//www.worldbank.org (publications)

workers who take up working opportunities in other regions or countries tend to move alone, leaving families behind.

Other schemes are in use such as *early retirement and post-benefit assistance* to the unemployed. The first scheme pays compensation to those firms which put workers on early retirement and provide for the early retirement pension. Hungary and Slovenia, for instance, have adopted such a scheme. The second scheme provides some form of income support to those long-term unemployed who are no longer entitled to benefits.

2.3. Labour demand policies

These measures focus on labour within enterprises and encourage enterprises and single entrepreneurs either to retain the existing labour or to create new jobs. The popularity of such measures has been in decline because of the negative stigma attached to subsidies and the fear of rendering enterprises once more dependent on the state. Also, the growth of unemployment and the consequent growth of the unemployment benefits bill has contributed to squeeze out demand measures. Thus, the range of these policies has been reduced to a few measures.

Subsidies to enterprises willing to take up unemployed persons have been adopted by several countries. Bulgaria subsidises employers who hire young professionals and skilled blue-collar workers though the programme does not seem very popular (Bobeva 1997). In Hungary employers who hire a long-term unemployed person may receive a wage subsidy for up to one year. The scheme, not very popular in its early stage covered 18% of participants in active labour market programmes in its third year of existence (Frey 1997). Poland also provides subsidies to employers who take up unemployed people selected from the employment offices under a scheme called 'intervention works'. Long-term unemployed, school-leavers and women are usually the target of these schemes (Gora 1997a).

Jackman and Rutkowski (1994) have argued that subsidies to enterprises can be an effective measure to prevent short-run unemployment growth. They argue that such policies should be 'selective', i.e. targeted to enterprises with some economic potential and in cases where the cost of supporting the unemployed would be higher than the cost of subsidies necessary to maintain the same people into work. Moreover, the local authorities should be able to support this type of social services and enterprises' difficulties should be recognised as transitory. Godfrey (1996) also seems in favour of this kind of intervention.

Hungary has experimented with *employment companies* in areas particularly depressed and traditionally reliant on one major company. The scheme allows the setting up of new companies for the absorption of laid-off workers. Although the scheme has been limited to few areas, it has been judged positively (Frey 1997). In CEE countries this is not a very popular measure but countries such as China have used it extensively. In China, public works are often substituted by the creation of special enterprises that employ laid-off workers (Godfrey 1995). Other experiments of this kind in Europe have been attempted in Germany with employment companies which *'(...) act as service delivery agents for labour market programmes and offer temporary employment to laid-off workers and unemployed in depressed regions'* (Godfrey and Richards 1997b).

Some countries such as Bulgaria have *subsidised bank credits* which are taken by enterprises with the purpose of creating new jobs. These subsidies have been financed with the employment fund thus falling under LMP but it is uncertain whether they really encourage enterprises to hire new labour or if they simply pay for labour needed anyway. More popular in most countries are *small and medium-sized enterprises (SMEs) promotion.* These measures include the support of SMEs through business and legal advice, micro-credit and training. The schemes exist in all countries and are often supported by foreign donors such as USAID or European Union's Tacis and Phare programmes. Such initiatives can hardly be labelled as LMP, but in some countries such as the Czech republic these measures were initially part of the active LMP financed by the employment fund.

Perhaps the most important LMP in Poland have been *apprenticeship* programmes. Enterprises are supported with small contributions for the employment of youth labour in need of experience. Where these activities are financed by employment funds they are considered active LMP. Such schemes are widely used in Western Europe and are one of the major forms of youth employment schemes in countries such as Italy or Germany. Occasionally, other forms of measures taken by enterprises in major difficulties such as *work-sharing and reduced working time* are supported and encouraged by employment services with some contributions, becoming in this way an additional form of LMP.

Demand side LMP lost ground vis-à-vis supply side policies. Overall, labour market policies in CEE countries maintained emphasis on the supply side. This seems in line with the prevalent view of scholars engaged on this front. In a 1997 report on labour markets in CEE countries, Boeri, Burda and Kollo conclude calling for a number of measures *'(...) to enhance labour supply in these countries'*. The issue of policies for the demand side usually falls under the domain of macro and industrial policies. LMP which envisage some form of subsidies to enterprises to encourage labour retention or absorption are looked at with suspicion and countries allowed for these measures to disappear gradually.

2.4. Are labour market policies effective?

The objectives of LMP are multiple. Unemployment reduction, income maintenance, the reduction of market rigidities to improve labour matching and reallocation and the prevention of long-term unemployment are some of the main objectives. The evaluation of LMP against these objectives remains complex, time consuming and costly. These obstacles have left the question of whether these policies are effective with no obvious answer. Schwanse (1996) commenting about LMP outcomes in OECD countries remarks: *'(...) Unfortunately the answers provided are far from clear-cut: evaluation studies tend to vary in terms of rigour,*

coverage, time horizon and evaluation results show that some programme seem to work well for some groups but not for others.' (p.17).

Evidence for CEE countries is scattered and controversial. A few experiments have been carried out to test the effectiveness of LMP. According to Rutkowski, M. (1996), in Hungary where these tests have been carried out for retraining and public sector employment there is scarce evidence that the schemes have been successful[2]. In Poland, retraining was also not found effective in increasing the outflow from unemployment (Gora and Sztanderski 1994). Rutkowski, J (1998) evaluated LMP in Poland and concluded that *'Although subsidised employment programs seem well targeted, they are not very effective in enhancing the chances of the unemployed to get regular jobs'.*

Of a different opinion is Nesporova (1998) who argued that the Czech Republic and Poland have been fairly successful in placing people into jobs after re-training, with placement rates exceeding on average 70% and 50% (1995) respectively. A programme designed to capitalise unemployment benefits to start small businesses in Slovenia was also found fairly successful by the same author when evaluated using a control group over a period of three years.

The only transitional economy which has been successful in maintaining a low level of unemployment for a long time is the Czech Republic. Nesporova and Uldrichova (1997) attribute the low level of unemployment in this country to relatively low real wages, labour hoarding in large enterprises, the absorption capacity of the private sector, high flexibility and mobility of the labour force and well designed employment policies. How much of the positive outcome is to be attributable to LMP remains to be estimated. According to Boeri (1996), in countries that have been more successful in stopping the rise in unemployment such as Poland, Slovak Republic and Slovenia, the achievement is to be attributed to substantial growth rates that would be difficult to be explained in terms of employment policies.

[2] Evidence is taken from O'Leary (1994) and Gill and Dar (1995)

3. Labour market policies in Kazakhstan

3.1. Labour market policies

The government of Kazakhstan has been initially fairly active with regard to labour market policies. The new ES system established in 1991 reformed the earlier system of placement offices. By mid-1993 the ES had 2,500 staff distributed in 300 regional and local offices. At the time, that was a ratio of 15 registered unemployed per PES official, which was a very low ratio as compared to Italy (397 in 1993), Norway (26 in 1994) or Poland (270 in 1993-1994). However, the initial positive start deteriorated quickly and financial resources devoted to LMP have been scarce as compared to other transitional economies. The employment fund's contributions represented between 1992 and 1996 no more than 0.2% of GDP which is less than what has been devoted to sickness or maternity benefits alone (IBRD 1998).

In spite of the scarce resources, Kazakhstan adopted initially a wide range of LMP including subsidies to enterprises, job creation schemes and housing programmes meant to facilitate labour mobility and the return of Kazakhs living abroad. In the early stage of reforms, policies focused on retraining schemes within enterprises to facilitate the upgrade of existing labour to new needs. Also, job-creation schemes addressed particularly to areas at risk such as small towns, rural areas and ecological disaster zones were introduced.

Table 6.2 reports the range of LMP adopted by Kazakhstan and the share of expenditures on different policies. It is shown that the share of expenditure on unemployment benefits increased from 5.5% to 56% of the total budget thereby compressing other forms of policies. That is due to the growth of the registered unemployed and it is comparable to what has been observed in CEE countries as reported in Boeri (1996). Employment services' administrative costs are the

second largest item of expenditure. These declined as a share of the total from 35.6% in 1992 to 15.7% in 1996.

Job creation and job security measures and enterprises' subsidies introduced in the early years virtually disappeared from the spectrum later on, job creation schemes and subsidies to converted defence companies as early as 1994. Housing programmes absorbed a substantial share of total expenditure, particularly the housing programme for Kazakhs returning from abroad in 1993 (43.5%). Housing programmes were still a significant share of expenditures in 1996. Expenditure on training increased from 11% to 14.8% during the period and public works from 0.6% to 1.1%. These last two are the only 'active' measures increasing between 1992 and 1996.

Table 6.2 - Employment fund expenditures

	1992	1993	1994	1995	1996
Expenditure as % of GDP		**0.1**	**0.1**	**0.2**	**0.2**
Structure of expenditure	***100***	***100***	***100***	***100***	***100***
Unemployment benefits	5.5	5.5	10.2	22.8	56.5
Training and retraining	11.0	11.0	15.4	12.5	14.8
Public works	0.6	0.5	0.9	0.7	1.1
Subsidies to enterprises for disabled labour	0	0	0	0.1	0.2
Subsidies to converted defence companies for training	11.4	1.6	0	2	0
Job creation	20.2	2.3	0	0.3	0
Job security/lay-off prevention	5.2	1.4	1.5	7.7	0.1
Employment service	35.6	28.2	35.1	19.5	15.7
Information services for enterprises and individuals	1.2	0.7	0.6	0.7	0.8
Retraining centre in Turgen	0	0	30.8	16.3	2.2
Housing for Kazakhs returning from abroad	0	43.5	5.3	6.1	3
Other housing programmes	0	0	0	10.5	4.1
Interest on EBRD loans	0	0	0	0	0.1
Other expenditure	9.2	5.3	0.3	0.8	1.5

Source: EU (1997), IBRD (1998)

3.2. Have labour market policies been effective?

All registered unemployed are assisted, mainly with benefits, training or public works. This means that in 1996, and according to the KLSMS, 29% of the total unemployed (U3 in chapter 4) were assisted with LMP (table 4.10, chapter 4). The share of job-seekers who find occupation declined throughout the period 1992-1996 (table 4.9, chapter 4). Considering that the number of registered unemployed actually started to decline from 1996 and that employment remained stagnant during the year, we should conclude that some unemployed lost hopes of finding a job through ES and abandoned this job-search mechanism. Therefore, less than one third of the ILO defined unemployed are assisted with LMP, and this share is decreasing.

Concerning *unemployment benefits,* we saw that the share of the unemployed on benefits increased (table 4.9, chapter 4). However, we also saw that benefits reach only 36.8% of the registered unemployed, that is 10.7% of the total unemployed (table 4.10, chapter 4). Of these, 56% received less than 1,000 Tenge and 93% less than 2,000 Tenge at a time when the average salary was just below 7000 Tenge (about USD 100) and the estimated Minimum Consumption Basket (MCB) pro-capita was calculated at 2750 Tenge. Thus, the 1996 KLSMS shows that the number of those who actually receive unemployment benefits is less than what is claimed by ES statistics and that the amount actually received is insufficient for basic subsistence needs. Unemployment benefits reach a small minority of the unemployed and do not perform the income maintenance function they are designed for.

ES data system provides information on the people on retraining and public work schemes which allow for a crude evaluation. Data are presented in tables 6.3 and 6.4 by region for 1996 and 1997.

Public works (table 6.3): In 1996, 24,446 people benefited from public work opportunities, equal to 4.4% of the job-seekers. 85% of the beneficiaries were

registered unemployed while public work was also offered to students and other groups of job-seekers in need. In 1997, the share of public work beneficiaries increased slightly to 4.6% of the job-seekers and within the beneficiaries the share of the unemployed increased to 89%. The share of long-term unemployed also increased between 1996 and 1997 from 25.3% to 34.4% of the total beneficiaries while the number of students and young people decreased. Most striking, however, are the differences across regions of any indicator. For instance the share of women beneficiaries varies from 26.9% in Kustanay to 75% in North Kazakhstan. People with dependants are given priority over other groups and ex-prisoners and refugees are also included in the schemes.

Training (table 6.4): The number of people on training schemes dropped from 4.4% of the job-seekers in 1996 to 2.5% in 1997. This implied a higher selectivity which resulted in a much better placement ratios of the trainees into jobs from 58.4% to 81.9%. A much smaller proportion of trainees create their own business and this proportion declined between 1996 and 1997 (2.2% in 1996 and 1.9% in 1997). About three fourths of the beneficiaries are young people below the age of 29 while there does not appear to be a significant gender bias. Among the young beneficiaries only one third have secondary education or more. Again, the regional diversity is striking. There are regions that manage to place virtually all the trainees into jobs and others which place less than one third of them.

Table 6.3 - Public works by Oblast, 1996, 1997

	Kazakstan	Akmola	Aktyub.	Almaty	Atyrau	East.Kaz	Jambul	West Kaz.	Karaganda	Kzil-orda	Kustanay	Mangistau	Pavlodar	North Kaz.	South Kaz.	Almaty city
Total 1996	24446	754	431	749	926	1472	128	1543	387	623	2182	429	1787	164	1639	745
Shares																
unemployed	85.3	65.3	100.0	97.2	100.0	96.0	39.1	79.2	100.0	100.0	100.0	94.2	42.2	86.6	97.3	100.0
younger than 20	25.5	15.3	26.9	19.5	25.6	27.4	10.2	37.5	19.9	20.5	21.8	21.4	69.6	45.1	18.1	11.3
women	45.4	41.6	41.8	61.7	67.0	49.8	35.2	45.8	68.7	37.4	26.9	47.6	55.8	75.0	45.1	40.7
close to pension age	1.0	0.5	0.5	0.0	1.1	0.7	0.0	0.9	0.0	3.7	0.0	2.6	0.5	1.2	1.9	0.8
invalids	0.1	0.1	0.0	0.1	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.7	0.8
people with dependants	31.8	42.8	35.7	47.1	27.4	27.6	45.3	32.4	41.1	29.9	37.6	35.2	14.5	12.8	37.8	47.9
long-term unemployed	25.3	26.8	16.2	25.6	28.2	7.7	18.8	18.8	39.0	24.7	30.5	30.5	13.1	23.2	26.4	18.8
ex-prisoners	0.4	0.0	0.5	0.3	0.2	2.9	0.0	0.6	0.0	0.6	0.1	0.0	0.3	0.0	0.5	1.1
refugees	0.8	0.0	0.0	0.0	0.0	0.1	0.0	10.2	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0
students on vacation	3.4	39.4	2.6	0.0	2.9	2.2	0.0	3.1	3.9	0.0	1.1	0.0	0.0	31.1	0.0	32.1
Total 1997	24379	812	1225	2868	1295	2264	63	532	2287	2386	1703	386	1664	1969	3055	1870
Shares																
unemployed	89.1	96.8	94.7	93.4	100.0	96.9	100.0	100.0	61.2	92.8	99.4	95.6	98.9	96.0	63.6	98.7
younger than 20	18.8	10.7	14.3	16.2	27.3	26.2	15.9	10.9	17.9	30.8	18.3	25.4	12.3	7.6	27.9	3.6
women	48.1	49.4	29.0	64.6	67.5	47.4	58.7	46.4	48.7	31.2	53.1	72.8	42.1	56.3	31.4	57.4
close to pension age	1.1	0.6	0.2	0.6	0.3	4.3	7.9	0.8	0.5	0.0	1.5	0.3	1.5	0.6	0.6	2.4
invalids	0.3	0.4	0.0	0.1	0.1	0.1	0.0	2.1	0.2	0.1	0.7	0.0	0.7	0.1	0.1	0.5
people with dependants	32.7	39.8	35.0	36.1	20.0	35.6	23.8	33.6	37.4	24.1	24.1	13.5	47.0	22.5	34.5	39.7
long-term unemployed	34.4	20.0	34.0	43.7	32.3	39.6	19.0	39.8	28.4	32.3	35.1	14.2	30.5	29.2	37.9	37.8
ex-prisoners	0.3	0.4	0.4	0.1	0.0	1.5	0.0	0.0	0.7	0.0	0.3	0.0	0.3	0.2	0.1	0.1
refugees	0.4	0.0	0.0	0.1	0.0	0.1	0.0	0.0	3.0	0.0	0.0	3.6	0.1	0.0	0.0	0.0
students on vacation	0.6	8.9	0.8	0.7	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: CSAK 1997 and 1998

Table 6.4 - Training by Oblast, 1996, 1997

	Kazakstan	Akmola	Aktyub.	Almaty	Atyrau	East.Kaz	Jambul	West Kaz.	Karaganda	Kzil-orda	Kustanay	Mangistau	Pavlodar	North Kaz.	South Kaz.	Almaty city
Total 1996	24739	1026	1234	1788	930	1901	523	1100	1350	1676	1164	640	956	572	1843	520
Shares																
now employed	58.4	90.7	48.9	50.4	39.1	70.0	98.9	67.6	44.7	77.8	77.3	80.8	74.0	71.2	53.7	52.1
now with private business	2.2	0.8	2.3	4.9	0.0	1.4	0.6	0.2	0.4	0.0	0.3	0.3	5.9	0.0	4.4	0.4
currently on training	20.1	8.0	3.5	30.5	7.1	11.0	16.6	5.6	35.3	41.3	5.8	0.5	8.4	50.2	19.3	41.0
from rural areas	36.0	18.5	33.5	64.5	32.0	19.9	52.0	15.6	62.8	15.9	30.3	48.3	41.4	11.2	46.8	34.4
women	50.6	36.5	61.1	60.7	40.4	48.0	61.0	36.1	47.0	40.9	41.2	35.6	57.0	43.2	43.8	48.7
invalids	0.3	0.8	1.0	0.0	0.4	0.3	0.0	0.1	0.1	0.3	0.0	0.5	1.3	0.3	0.4	1.2
ex-prisoners	0.3	0.4	0.2	0.2	1.0	0.3	0.0	0.4	0.1	0.5	0.0	0.5	0.1	0.3	0.3	0.0
young 16-29	78.7	83.1	83.8	69.2	77.5	81.9	80.7	80.7	85.8	81.7	77.3	80.5	76.4	80.9	79.2	72.9
young 16-29 from rural areas	31.0	17.3	30.8	45.5	25.1	18.8	47.0	11.6	55.6	14.3	23.2	47.7	37.2	11.0	37.7	31.7
young 16-29 with secondary education	25.9	23.8	1.7	17.2	45.1	10.1	67.3	34.3	43.6	22.9	51.1	1.6	35.6	2.6	1.7	52.5
young 16-29 with higher education	2.6	3.4	0.0	3.8	4.3	0.4	13.4	1.3	3.3	2.4	1.8	0.3	2.9	0.0	0.6	14.8
Total 1997	13345	642	647	2721	610	583	248	971	2011	490	429	419	890	447	341	1896
Shares																
now employed	81.9	86.8	56.4	74.2	56.7	88.7	97.2	97.8	89.7	79.2	85.5	96.9	55.5	99.6	94.7	89.9
now with private business	1.9	0.2	0.3	5.0	0.2	0.2	0.0	0.5	3.9	0.2	3.3	0.0	1.7	0.0	0.0	0.0
currently on training	33.6	38.9	5.6	38.4	31.6	43.1	100.4	54.8	35.7	14.1	15.9	33.4	10.6	45.4	34.3	27.7
from rural areas	29.8	21.7	21.0	49.3	20.3	35.0	44.4	53.8	16.3	47.8	43.1	21.5	41.3	13.6	39.9	0.0
women	54.9	46.3	74.7	63.0	57.5	43.1	67.3	53.7	40.3	44.5	62.5	47.5	34.9	52.1	38.4	72.7
invalids	0.3	0.3	0.5	0.2	0.2	0.3	0.0	0.2	0.5	0.0	1.2	0.0	0.9	0.2	0.0	0.3
ex-prisoners	0.3	0.6	0.2	0.1	0.5	0.3	0.0	0.0	0.5	0.0	0.0	0.0	1.9	0.9	0.0	0.2
young 16-29	73.0	74.5	81.5	74.6	87.5	78.9	77.8	85.6	80.1	63.5	74.4	85.4	79.0	68.0	83.6	41.8
young 16-29 from rural areas	24.2	17.4	19.5	35.0	19.3	28.0	38.7	49.9	14.2	34.3	34.7	21.5	34.7	13.2	36.1	0.0
young 16-29 with secondary education	16.6	7.9	2.0	21.7	5.6	4.8	57.3	33.2	8.0	55.5	11.4	0.0	7.9	49.2	76.2	0.1
young 16-29 with higher education	2.9	7.9	0.0	2.8	2.3	0.7	20.6	5.7	0.3	2.7	4.9	0.0	0.3	14.8	7.0	0.0

Source: CSAK 1997 and 1998

The coverage of public works and training is small. Only around 8.8% of ES job-seekers benefited of training or public work in 1996 and this proportion declined to 7.1% in 1997. On the other hand, the placement ratio of training programmes is fairly good given the harsh market conditions and the targeting of both public works and training seems appropriate. A preference for young people, long-term unemployed and people with dependants exists reflecting the structural composition of the unemployed and a focus on the most in need. While small categories at risk such as the ex-prisoners, refugees and invalids are not forgotten. There is a small gender unbalance considering that women are still the majority of the registered unemployed and there is a strong bias in favour of young people. Nonetheless, on the whole, it could be said that these policies are effective given the limited and declining resources available to ES.

I do not have at my disposal proper instruments for evaluating *special subsidies to enterprises.* However, these measures almost disappeared from the labour market policies portfolio and cannot possibly have had any significant impact on the labour market in Kazakhstan in recent years. Moreover, subsidies, when they existed, were targeted to disabled labour and converted defence companies covering a very small share of the labour force. Again, it would be difficult to sustain the existence of any relevant positive or negative impact of these measures on the labour market as a whole and we do not have firm specific data to discuss local implications of these measures.

Job creation and job security measures also disappeared in recent periods. The disappearance coincided with the massive lay-off of the post-1993 period. Up until that time employment did not decline in Kazakhstan. However, whether and how job creation and job security measures contributed to employment retention and creation cannot be estimated with the available data.

Housing benefits and programmes have been popular in Kazakhstan. This was partly due to the national policy of encouraging Kazakhs living abroad to come back and settle in the country. In 1993, 43.5% of all employment fund resources

went for this purpose alone. This effort declined over the years but in 1996 still 3% of resources were allocated for this purpose with an additional 4.1% used for other housing programmes. Given the diversity of local market conditions and given the existing poor housing market, labour mobility can benefit a great deal from housing programmes. However, these programmes too are losing ground vis-à-vis passive policies.

In conclusion, LMP in Kazakhstan show similar features to what we observed for CEE economies. The range of LMP initially adopted was large but unemployment benefits have squeezed out other policies over the years. The only active LMP which maintained and increased somewhat their share on total expenditure are training and public works, the effectiveness of which remains an area of study. Perhaps, Kazakhstan has been more active than CEE countries on the housing policy front being quite successful in repatriating Kazakhs living abroad. On the other hand, employment fund's resources are limited and the provision of unemployment benefits seems poorer than in CEE countries.

4. Who needs help? Labour and Poverty

All registered unemployed in 1997 were still receiving some form of assistance, whether in terms of benefits, training or public works. However, it was shown that the support is limited and that the number of registered unemployed is small as compared to the number of those seeking employment. It is also the case that once we take into account the total number of unemployed, the structure by gender, age and education changes significantly. Among those who do not apply to employment services, the majority of the unemployed is not represented by women but by men and the share of youth unemployment is much higher than what registered figures show (table 4.11, chapter 4). Therefore men and young people tend not to register and registered unemployment is not a representative sample of the total unemployed.

There are also a considerable number of the formally employed who have *de facto* no jobs as shown in the underemployment section of chapter 4. At least 10% of the employees did not provide any work and were not paid (table 4.7, chapter 4). In addition, there are a number of people who are formally categorised as *economically inactive* but who under normal circumstances would be looking for work. The discouraged unemployed is one example. During deep and protracted recessions the number of these people is likely to be high, as chances of employment are realistically very scarce. There is also a class of people who may wish to work and have the potential to do so but who are incapacitated because of social duties emerged during the recession. Many women who were formally employed had to give up their jobs to look after the children or the elderly in the household (*housekeepers*).

Labour market distress has spanned well over the population target of labour market policies and has affected groups of individuals that would be normally protected from poverty and destitution from other members of the household. This meant that over the years the concern of the Kazakh authorities and international observers have progressively moved from labour market issues and the protection of the unemployed to poverty issues and the protection of the destitute irrespective of labour status.

Poverty is not a completely new phenomenon in Kazakhstan. Central Asia was known to be one of the poorest areas of the Soviet Union. Atkinson and Micklewright (1992) using as a measure of poverty a Minimum Consumption Basket (MCB) calculated from the Soviet Union's family budget survey found that in 1989 approximately 15.5% of the Kazakh population had a per capita monthly income below the poverty line. Milanovic (1998) using a threshold of four international dollars per day at 1990 prices found that the percentage of the population living below the poverty line in 1987-1988 was 5%.

During transition poverty increased. Milanovic (1998) found a rise in poverty to 50% of the population by 1994. The 1996 Kazakhstan Human Development

Report using as a poverty line a MCB estimated a poverty figure of 64% of the population in August 1995. A World Bank study on living standards in Kazakhstan (1998), based on the 1996 KLSMS, puts the poverty figure at 34.6% of the population. As noted by this last study, such a diversity in estimates is due partly to the methods employed but also to the sensitivity of the choice of any particular threshold.

Other findings of the World Bank report (1998) show a poverty gap ratio of 11.4%, higher poverty in rural areas (39% against 30% in urban areas), strong differences across regions with the Southern regions being by far the poorest and the Northern regions being the least, while there is not a substantial difference across gender. Inequality, according to the report and as calculated with a Gini coefficient, was 0.35; an increase from 0.29 as estimated for the region in the 1980s. In relation to labour, the report finds that the bottom quintiles in the income distribution tend to have lower participation, higher unemployment rates and a higher dependency on employment[3].

From the 1996 KLSMS, I calculated poverty incidence rates (percentage of individuals living in households with annual consumption per capita below the poverty line) for all the labour categories I have been using in this study and by gender, age, location and regions. The results are reported in table 6.5. The table is self-explanatory but some important aspects should be highlighted.

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[3] Headcount poverty (H) and the poverty gap (PG, a measure of the depth of poverty) are calculated as follows:

$$H = \frac{q}{n}$$

$$PG = \frac{1}{n}\sum_{i=1}^{q}\frac{(z - y_i)}{z}$$

q = Number of people below the poverty line
n = Total number of people
z = Poverty line = 2861.4 tenge (IBRD 1998, p.12)

Poverty incidence is high across all categories, including the **employed.** This confirms the precarious state of employment altogether as described in chapter 4. Overall 28% of the employed are below the poverty line.

Across employment categories defined in terms of ownership, the private employees are better off with 'only' a share of 21% below the poverty line. On the other hand, the self-employed seem to be the worse off with a 32% share[4]. It is also noticeable that the self-employed seem to situate themselves between the employed and the unemployed in terms of poverty incidence.

There is a substantial difference between paid and non-paid employees suggesting that those who have not been paid at the time of the questionnaire are not a random sample of the population but a segment which probably is usually not paid[5]. The difference between paid and non-paid is most remarkable among the very young (14-24). There is almost no difference in poverty between the employees working full-time and those working part-time. This may simply mean that those working part-time do so because living in relatively wealthy households.

Poverty incidence among the employed seems to be rather equally distributed across gender except for the private employees and the self-employed. In these cases, poverty incidence is definitely higher for males. Age distribution does not present any particular pattern, while poverty incidence among the employed is higher in rural areas, except for the private employees. Regional differences are remarkable, while the same pattern across employment categories is reproduced very seemingly in each region[6].

[4] The self-employed here include all self-employed and not only the 'business owners' as in chapter 5

[5] This need not to be in contrast with chapter 5 where it was found that private paid and non-paid private employees are not significantly different. Here the figure is mostly affected by state employees who represent 88.5% of employees.

[6] Regional differences may be partly explained by the fact that regional price indexes were used to adjust consumption estimates.

Poverty incidence for the **unemployed** is calculated using the different definitions of unemployment adopted in chapter 4. The first important aspect is that poverty incidence seems to increase moving from the loosest definition (wish to work) to the stricter (registered unemployed on benefits) and that this pattern is maintained across gender, location and regions. This is quite obvious looking at the increase in value from the unemployed applicants to state employment centres (41%) to the registered unemployed on benefits (46%) which suggests that, although unemployment benefits are not designed to target the poor, the selection mechanism in place to identify the unemployed in need was rather successful in favouring the poorest. It may also mean that those in real need tended to converge, as a last resort, to employment centres, though the increase in incidence between those who wish to work and the applicants to employment services is much less obvious[7].

The second relevant finding is that the poverty incidence among the unemployed is significantly higher for males. The age pattern is not so obvious. It seems to be higher among the very young in U1-U2, while is the opposite for U4-U7. Poverty incidence for the unemployed is also higher in rural areas and in the Southern and Western regions as it was the case for the entire population.

The **economically inactive** were divided in categories as homogenous as possible keeping in mind that a minimum number of observations in each cell was necessary for the table to have any meaning. The categories are self-explanatory and were calculated from those who at the time of the survey were not working. A working pensioner or student is classified as employed. For students, answers were double-checked with the section of the survey which dealt with education, therefore students should include all those who at the time of the survey were in education. The category 'other' was calculated as a residual and includes those who had not responded to any of the relevant questions or who could not identify themselves with any of the categories described.

[7] Note that the number of observations in U5 is rather small and should not be taken as significant

As a general remark, the economically inactive show similar figures to the unemployed in terms of poverty with rates generally higher than the employed. Students show a rather average pattern with a 34% overall incidence, higher rates for males and in rural areas and the usual distribution across regions. This may not be surprising. When children are taken as individuals, they tend to show higher poverty rates. That is because large families tend to be poorer. On the other hand, those still in education between the age of 14 and 24 tend to be from wealthier families as poorer families have a harder time to support children in education[8]. Therefore the two phenomena probably cancel each other out leaving the student category with an average pattern.

Poverty incidence among disabled and ill is generally high and higher for males, young people and rural areas, while the regional pattern follows the pattern observed for other categories. Pensioners seem to reflect the average pattern of poverty with an overall rate of 34% and a standard distribution across regions. The only peculiar feature is an equal distribution between gender and urban and rural areas which reflects perhaps a rather egalitarian pension system irrespective of the profession, a heritage of the Soviet pension system.

Poverty among housewives and women on maternity leave is generally higher than the national average with a 43% incidence, more severe in rural areas and very severe in the Southern regions with a peak of 82%, the highest value in the table. This is a phenomenon that deserves more attention and research as the difference with other regions or categories is remarkable.

There is also a group of young individuals between the age of 14 and 24 who are not in school and not employed. These are found in the two categories 'discouraged unemployed' and 'Other' which also show high poverty rates (47% and 38% respectively). 56.5% of the discouraged unemployed and 88.4% of the category 'other' are young people in age 14-24. This is almost 6% of the

for the regional distributions.

[8] This used not to be the case in the Soviet Union and it is a clear product of the process of transition.

population. Poverty among the very young is probably a new phenomenon in Kazakhstan determined by the process of transition and the difficulties that many families are facing in substituting declining public provision of education with private provision. Up until now, it was fairly clear that unemployment affected the young in a particularly harsh way. What was not clear, was that the youth in need are found well beyond those usually identified as unemployed. Poor young people seem to go undetected because still sheltered by a supporting family and because they do not 'fit' any generally recognised labour category.

Labour market changes which have occurred during the transition have changed not only the labour profile but also the poverty profile of Kazakhstan. Categories that once fell in well identified target groups for social assistance such as mothers with many children or the disabled are now accompanied by additional categories born in the process of change. Some of these categories such as the unemployed were an expected development of transition and transitional economies equipped themselves early on to protect this group. However, the complexity of changes went far beyond what the employment services could cope with or even 'see'. Several other new categories of people in need such as some of the employed and some of the economically inactive have emerged though not recognised or not recognisable by the government. While these groups are a consequence of labour market distress they are nowhere close to qualifying for labour market targeting.

Table 6.5 - Poverty incidence by labour groups

	Males	Fem.	Age 14-24	Age 25-55	Urban	Rural	Cent.	South	West	North	East	**Total**	**Obs.**
Employment													
Total employment	**0.28**	**0.27**	**0.30**	**0.27**	**0.25**	**0.31**	**0.22**	**0.64**	**0.29**	**0.07**	**0.25**	**0.28**	**2925**
Total employees	0.26	0.26	0.28	0.26	0.25	0.28	0.21	0.65	0.30	0.08	0.23	**0.26**	**2303**
State employees	0.26	0.28	0.32	0.27	0.26	0.29	0.20	0.65	0.29	0.08	0.26	**0.27**	**1669**
Private employees	0.24	0.15	0.20	0.22	0.23	0.13	0.22	0.57	0.23	0.11	0.18	**0.21**	**215**
Paid employees	0.22	0.22	0.20	0.22	0.21	0.24	0.20	0.61	0.22	0.04	0.21	**0.22**	**1265**
Non paid employees	0.32	0.32	0.34	0.32	0.34	0.31	0.23	0.68	0.39	0.12	0.26	**0.32**	**1054**
Full-time employees	0.26	0.27	0.28	0.26	0.25	0.27	0.21	0.67	0.33	0.07	0.22	**0.26**	**1457**
Part-time employees	0.28	0.26	0.29	0.27	0.25	0.29	0.20	0.61	0.26	0.09	0.26	**0.27**	**866**
Total self-employed	0.35	0.29	0.34	0.31	0.23	0.41	0.30	0.61	0.22	0.03	0.32	**0.32**	**622**
Owners of ent. self-employed	0.40	0.30	0.40	0.35	0.17	0.46	0.48	0.62	0.11	0.00	0.43	**0.36**	**241**
Other self-employed	0.32	0.28	0.32	0.28	0.26	0.35	0.16	0.61	0.31	0.05	0.24	**0.30**	**381**
Unemployment													
U1 - Wish to work (not employed)	0.42	0.39	0.43	0.40	0.37	0.44	0.26	0.73	0.43	0.11	0.42	**0.41**	**608**
U2 - Job seeker (self-evaluation)	0.45	0.44	0.46	0.43	0.43	0.46	0.26	0.73	0.43	0.17	0.47	**0.45**	**420**
U3 - Job seeker past 30 days or registered	0.45	0.38	0.41	0.41	0.42	0.41	0.25	0.68	0.48	0.15	0.46	**0.41**	**365**
U4 - Job seeker past 30 days at employment centres	0.45	0.37	0.36	0.44	0.36	0.44	0.29	0.69	0.48	0.14	0.45	**0.41**	**198**
U5 - Job seeker past 7 days	0.39	0.40	0.40	0.41	0.42	0.37	0.30	0.76	0.41	0.26	0.36	**0.40**	**139**
U6 - Registered unemployed	0.45	0.44	0.38	0.47	0.37	0.50	0.15	0.69	0.58	0.24	0.45	**0.45**	**101**
U7 - Registered unemployed on benefits	0.50	0.44	0.42	0.48	0.38	0.50	0.00	0.60	0.77	0.13	0.44	**0.46**	**39**
Economically inactive													
Students	0.39	0.28	0.34	0.25	0.32	0.36	0.19	0.68	0.35	0.03	0.28	**0.34**	**306**
Disabled or ill	0.55	0.34	0.64	0.42	0.38	0.50	0.20	0.75	0.71	0.09	0.40	**0.44**	**72**
Pensioners	0.35	0.34	0.36	0.34	0.35	0.34	0.28	0.66	0.41	0.10	0.27	**0.34**	**784**
Housekeepers or maternity leave		0.43	0.47	0.42	0.35	0.52	0.37	0.82	0.23	0.05	0.42	**0.43**	**224**
Discouraged unemployed	0.42	0.53	0.54	0.39	0.38	0.52	0.40	0.80	0.36	0.06	0.36	**0.47**	**165**
Other	0.36	0.39	0.36	0.44	0.33	0.41	0.35	0.62	0.54	0.12	0.28	**0.38**	**431**
Chidren (<14)	0.42	0.41			0.33	0.47	0.30	0.75	0.44	0.13	0.38	**0.41**	**1904**
Total	**0.35**	**0.34**	**0.39**	**0.30**	**0.30**	**0.39**	**0.27**	**0.69**	**0.38**	**0.09**	**0.46**	**0.35**	
Total observations	**3445**	**3758**	**3322**	**2897**	**3554**	**3668**	**1372**	**1475**	**997**	**1442**	**1936**		**7222**

Source: 1996 KLSMS

5. The future of labour

5.1. From transition to development

In Soviet times, the enterprise had the double function of production unit and dispenser of community services. Though the source of subsidy was the same, the enterprise accounting recognised this dichotomy and maintained the two sectors separate in the spirit of the material and non-material macroeconomic distinction. As the nature of the economic decline has been centred around the malfunctioning of the enterprise, the direct consequence of the production decline has been reflected on both the production and material side, including the provision to workers in terms of wages and benefits, and on the social services and non-material side in terms of the provision of social services to the community. This two-sided consequence of the recession occurred in concomitance hitting households from the two ends of income and social provision.

By definition, the process of transition implied the privatisation of enterprises and with it the transfer of social services to local administrations. However, local administrations financing had to rely forcibly on levies from enterprises so that whether this transfer of responsibilities occurred or not the fate of social provision remained irremediably linked with the fate and health of enterprises. In other words, the state of enterprises has been and still is to a large extent closely associated with household welfare.

The continuing decline in enterprises' production has been substituted in time with alternative forms of production most visible in the self-employment sphere and the trade and catering sector. This phenomenon emerged as a necessity for households to escape the negative cycle affecting enterprises, to cope with transitional changes and to preserve a subsistence minimum standard of living. While this phenomenon may have contributed to limiting somehow poverty growth, it also represents an 'informalisation' of the economy that keeps scarce resources away from the reach of the state and undermines long-term growth

potential by constraining valuable human capital in low productivity and value added activities. Hence, a severe decline of government revenues and a growing incapacity of the state to face its new responsibilities in terms of social assistance and social protection.

In such an environment, the real losers and the new poor may be found not only in traditional 'pools' such as the less educated, the unemployed, the old or those employed in the informal sector, but also in new 'pools' such as among the formally employed, new labour market entrants or people in prime working age. This aspect complicates the task of the state in identifying those at risk of severe poverty and destitution, potentially reducing further the impact that the state may have in its social protection policies.

5.2. From labour market policies to social protection strategies

Despite the diversity between CEE and CIS countries in labour market experience depicted throughout this work, Kazakhstan took a very similar approach to labour market policies to what the OECD and CEE experiences had to offer. With little resources, ES did their best managing to assist somehow all the registered unemployed. Unemployment benefits, re-training and public works reach all but only the registered unemployed. They reach only a small proportion of the total unemployed and do not reach the economically inactive in need of a job. They do not reach those people formally employed but with no or little income and work.

If we put LMP in relation to the different current conditions which Kazakhstan faces vis-à-vis CEE countries, it is clear that LMP can do little either to put people back into work or to alleviate poverty. LMP in Kazakhstan failed on the fronts of unemployment reduction and income maintenance for different reasons. Unemployment reduction is arduous if structural conditions and enterprise conditions do not improve while income maintenance is caught in between the growth of unemployment and the reduction of enterprises' contributions to the employment fund.

This raises the question of whether Kazakhstan made the right choice by abandoning demand side LMP such as subsidies to enterprises for specific purposes, job creation and job losses prevention measures. For some of the CEE countries where macro and micro economic conditions allowed for enterprise restructuring and the growth of a new private sector, the management of the unemployed may be better achieved outside enterprises in order to facilitate restructuring and labour reallocation as early transition models foresaw. But in a CIS environment, where financial resources have been depleted by long lasting hyperinflation, where the disruption and disorganisation of production have been larger and the recession deeper and where the social cost has been higher, LMP focused on the supply side may not be the best tactic.

Maintaining a worker in an enterprise rather than in redundancy can satisfy different objectives. Even if the worker is paid only occasionally the latter could benefit from some services still provided by enterprises. Taking these into account, income can hardly be below the current level of unemployment benefits. The training provided to the unemployed can simply be provided on the job, increasing the chances of matching the worker with enterprises' needs and giving to the same enterprise the necessary confidence in the worker's abilities. Also public works' funds, if shifted to the enterprise, could better serve the community by focusing on supporting units of production rather than the general public. At the same time, social inclusion is guaranteed given that all workers would face the same destiny and that the social fabric would be maintained. Moreover, discrimination would not occur between those who are currently formally employed but with no income or work and the registered unemployed while the number of non-registered unemployed would be reduced.

In April 1999, the Government of Kazakhstan introduced major reforms in the area of social protection. The new system now includes a Social Assistance Programme (SAP) managed by local authorities and meant to alleviate poverty and a Special State Allowance (SSA) programme administered by the central

authorities meant to support persons with special needs. Until 1998, there were 47 special categories of people such as war veterans and disabled entitled to a range of 202 different types of special discounts such as discounts on telephone use or transportation. The new system reduced the categories to 14 and replaced most discounts with a single cash allowance.

Labour market policies fall under the SAP. In the new scheme, employment centres are privatised and supposed to become self-supported entities by selling their services to the enterprises and by managing government funded programmes. The employment fund and unemployment benefits have been abolished while a new single social tax (21% of wage bill) should finance active labour market policies, including public works and training. A wage subsidy program for employers contributing to the public works schemes is also part of the new programme.

This new direction in social protection seems to recognise that labour market policies meant little on their own. The unemployed and labour market policies are no longer special categories managed independently but they are now part of an integrated social protection strategy. While the new system already showed poor applicability especially in relation to the establishment of independent exchange offices, the underlying strategy seems appropriate. The poor become the priority for social protection and labour market policies become one of the instruments to alleviate poverty. This is also the direction supported by international donors such as the World Bank and perhaps the only feasible approach given the poor and still declining government revenues.

5.3 From adjustment to recovery

The government of Kazakhstan is beginning to adjust to a new scenario of poverty and development unimaginable only a few years ago. The first painful but important step to take in order to think anew about how to move from the current long-lasting adjustment phase into a recovery phase is in fact to recognise that the

country finds now itself in an early stage of economic and industrial development. The current industrial system is a shadow of what used to be and the memory of what used to be is of little help in devising a modern industrial system.

In many ways, the current situation in Kazakhstan resembles European countries in the post-war years. European economies were emerging from a large output fall determined by the war and faced the need to reconvert the industrial apparatus from a war type to a market type. This is rather similar to converting the industrial structure from a planned to a market economy. European countries also experienced a breakdown of industrial and trade relations with other economies due to the war that badly affected production. This seems also similar to what Kazakhstan experienced soon after independence with the breakdown of relations between Soviet enterprises.

What is less clear is why a similar situation has been confronted with radical different means. Privatising large state owned companies immediately after the war or cutting subsidies to private enterprises would have seemed a rather strange approach to converting these same companies from producing tanks to producing tractors. Prices of basic food commodities (at least in the formal economy) were indeed regulated and subsidised to prevent major forms of destitution from emerging during a period when problems related to production and distribution were not yet solved. After the war, European countries established first a provisional government and then quickly set-up large state organisations in charge of determining the industrial priorities and channelling the Marshall plan and other funds into industry and infrastructures accordingly.

The fact that privatisation is an essential instrument to boost productivity in contemporary Europe says little about contemporary Kazakhstan. The government of Kazakhstan, that for a long time limited its vision of industrial development on the oil industry now seems to recognise that the solution to poverty and unemployment will not be found, at least in the medium term, in the oil industry. The experiences of Nigeria and Venezuela above all have shown that there is a lot

more to fighting poverty and industrial development than oil revenues. The real issue still to be seriously tackled remains the identification of a clear industrial development strategy in branches that can potentially absorb large quantities of labour and that are likely to transfer growth onto other branches such as light industry and manufacturing.

CHAPTER 7

CONCLUSION

In the course of this work three concomitant processes of change have been explored. The first is the process of transition defined as a standard set of economic reforms thought necessary to move from a planned or command economy to a market economy. This standard set of reforms was identified with price liberalisation, trade and exchange rate liberalisation, establishment of property rights, privatisation, establishment of market financial institutions and macroeconomic stabilisation policies. The second process of change analysed in this work has been the deep recession that characterised the early years of the transition period. Though linked to the process of transition, the relationship with the latter is complex and articulated and, as it was the case for the recession in the 1930s in countries such as the United States and Germany, the 1990s recession in the Post-Soviet economies is both historically unique and of outstanding proportions. The third process of change explored is the process of change of the labour market. This is seen as a consequence of the combination of the two named processes of transition and recession and, at the same time, as one field where to seek causes that may contribute to explain the prolonged stagnation in which most post-Soviet economies found themselves in starting from 1995.

The main aim of the thesis was to contribute to explaining how the supply of labour in the post-Soviet economies has changed and how these changes can explain the peculiar pattern of labour reallocation between sectors defined in terms of ownership (state, private or self-employment). As labour market changes have been perceived mainly as a consequence of the macroeconomic changes occurred, it was felt necessary to start the story from these macroeconomic changes and see how transitional reforms and the crisis of the enterprise have filtered down affecting households and eventually labour supply. Changes in labour supply have been, in turn, studied as possible factors that can contribute to explain the difficult transition to recovery.

Chapter 1 introduced the work by drawing a parallel between CEE and CIS countries. It has been shown that, roughly speaking, the two blocks of countries have followed different paths in terms of growth idealised in the U-shaped and L-shaped output developments. The recession in the CEE countries has been shorter and less deep that the one observed in the CIS countries. The relationship between the decline in output and the decline in employment has also been very different with the CEE countries experiencing a decline in output proportional to the decline in employment. On the contrary, the steeper decline in output in the CIS has not been reflected in a proportional decline in employment determining a deep fall in productivity. In fact, adjustments in the labour market appear to be different looking at a range of different issues such as the number of those who register at employment offices or the reallocation of labour between economic sectors.

After the first few years of transition, it was argued that CIS countries had been slow reformers and that if countries were compared adjusting the state of advancement of reforms the two blocks of countries would show a very similar path in output development. As shown in chapter 1, this same argument no longer stands looking at the second half of the 1990s when reforms in the CIS have been pushed through and output did not show any significant sign of recovery. In fact, in some areas such as macroeconomic stabilisation, the CIS economies outperformed their CEE neighbours. The pace of advancement of reforms seems no longer a leading candidate to explain the difference between the CEE and CIS performances.

One of the evident and most remarkable aspects of labour market changes in many CIS countries has been a steep rise in self-employment. This phenomenon has been little studied in the economic literature of transition despite its magnitude mainly because the focus of attention, especially in early transitional models, has been the enterprise and the bargaining process for wage determination occurring within enterprises between owners, management and workers. Answers to questions arising from issues such as the reallocation of labour, enterprise

restructuring and the growth of unemployment were sought in the dynamics explaining such bargaining process. In chapter 1, it was suggested that exploring self-employment, thus shifting the attention outside enterprises, could add useful elements to the understanding of the labour market in transition.

In chapter 2, a framework of analysis making use of self-employment was offered. In such framework a number of critical aspects have been emphasised. First, it was shown how the depth of the recession can be instrumental in determining the recovery capacity of a country. The deeper the recession the more difficult is to re-establish growth and reach the pre-transition level of output. Second, the initial shock experienced by CIS countries in 1991 and 1992 has been explained mainly in terms of a supply shock, meaning a sudden and sharp increase in industrial input prices due to price liberalisation. This occurred in parallel with disruptions in industrial supply of intermediate goods caused by the break-up of the Soviet Union's system of exchanges. The recession eventually affected the demand side of the economy hitting households on different grounds including loss of savings, steep fall in real wages and decline in public services' provision.

During the adjustment phase, while the government remains mainly concerned with stabilisation measures, enterprises and households continue to face major difficulties. Enterprises are being privatised but not restructured partly because management and control is diluted among a multitude of co-owners and partly because of insiders' resistance to change, but mostly because restructuring requires a substantial injection of capital which is simply not available (the credit crunch argument). There are no private savings in the financial system (or where these exist are invested abroad), FDIs focus on few strategic sectors such as oil and gas, the government is applying hard budget constraint policies preventing enterprises from accessing soft loans, and commercial banks rely on the central bank for borrowing capital. Therefore, there is very little liquidity in the system and this does not reach enterprises for the purpose of restructuring.

Throughout the adjustment phase, wages in the state sector continue to decline relatively to other sectors. At one point, the average income package that state enterprises are able to offer to workers becomes equal or smaller than what the private or self-employment sectors have to offer. At this stage, many workers will be encouraged to leave state employment and try their fortune elsewhere. Unemployment may be taken up as a temporary condition but the level of benefits is insufficient for basic needs. Employment in the private sector is constrained to few areas and economic sectors and access is rationed. As a consequence, for many workers, inventing their own job and becoming self-employed becomes an attractive alternative.

With enterprises declining irreversibly, whether state or privatised, and with the decline in private savings and public provision, households had to reorganise themselves to cope with the crisis. By doing so, the supply of labour had to change and this, in turn, contributed in determining the peculiar reallocation of labour observed. The labour supply model presented in chapter 2 depicts the main dynamics thought to explain the reallocation of labour in a context where self-employment has been growing steadily.

The labour supply model sees three working sectors – state, private and self-employment – and two non-working sectors – unemployment and economic inactivity. Each sector is perceived as a possible choice for workers with its own rewards and constraints. A clear hierarchy between sectors is not established *a priori* and workers value each sector according to the potential total income that may accrue to them at the end of the month and according to non-income factors such as location and household attributes. Sector participation is the result of a combination of rationing (employers' screening and local opportunities) and preference (expected income and household needs) factors. By formalising the labour supply model in this way, two elements are emphasised. The first is that potential income, meaning the total pay package that workers expect from each sector, is what is thought to matter for workers as opposed to the formal or contractual wage that each sector may be offering on the market. The second

element is that non-income factors are brought into the model on the same plan as income factors. That is because it is expected that, in times of transition and recession, changes occurring in households and local labour markets affect the supply of labour significantly.

The persistence of such scenario where self-employment grows both as a workers' choice and 'by default' can potentially lead to a situation of a developing type with large portion of the population employed in informal, illegal and subsistence activities. If this occurs, then the transition from the adjustment phase to the recovery phase is no longer a matter of pushing transitional reforms through but it becomes an issue of economic development with problems similar to what – say - poor Latin American economies have been struggling with during the past fifty years. Hence, a clear change in policies and approach to the study of CIS countries would be needed.

Part II of the thesis turned to verify some of the pillars of the framework presented in chapter 2. The case study Kazakhstan is taken as one good example of a CIS economy that experienced a major recession during transitional reforms and that, as a result, is experiencing a sharp growth in self-employment. The time window 1990-1996 has been selected because this is the time period when the recession and adjustment periods can be documented with both administrative and survey data.

Chapter 3 illustrated transitional reforms in Kazakhstan as they occurred between 1990 and 1996. Three distinctive periods of reforms have been identified. The first period before independence in December 1991 has been characterised by asymmetric reforms and changes in the republics of the Soviet Union that brought about price disparities and the first difficulties in exchanges of goods, particularly after the first rounds of price liberalisation in January and April 1991. This rendered the supply of goods to the economy difficult and widened the already existing demand-supply gap typical of the Soviet economy. The second period between 1992 and 1993 starts with independence and a major price liberalisation

operation in January 1992. These two concomitant events disrupted the flow of commodities between the now ex-republics of the union and determined a sudden slow down in enterprises' production, particularly in those sectors that most relied on imported intermediate supplies. This period has been characterised by hyperinflation, output decline and monetary instability determined by the incapacity of the Russian central bank to keep the monetary base under control and coordinate monetary policies across the ex-republics. During the third period, between 1994 and 1996, the output decline comes to a halt and monetary discipline is established but no signs of a recovery towards sustained growth are visible (the adjustment phase).

The explanations behind the output decline in transitional economies have been numerous and some of these have been identified as possible causes of the output decline in Kazakhstan. The excessive initial reliance on Russia for transfers and on the Soviet Union for trade and the chronic overmanning and overcapitalisation in enterprises prior to the beginning of the process of transition have been important factors in explaining such a rapid decline in the early years. Shortage of liquidity and credits contributed in constraining the restructuring potential later on. One important aspect that perhaps has been obscured by the 'speed of reforms' debate was the actual time and sequencing of reforms. Many reforms seem to have gone wrong not much for the speed or even content but for the timing. Price liberalisation and privatisation occurred in the absence of the basic institutions of a state such as the judiciary and legislative branches and during a period of provisional and fast changing governments. The traditional control once guaranteed by the central party has not been replaced by democratic institutions and enforceable rules and regulations for a market economy. As a result, many economic agents, including enterprises and local administrations, have operated at their own will and driven by short-term self-interest during the crucial period of transitional reforms.

The peculiar nature and dynamics of the output decline translated into structural changes in the industrial apparatus. The industrial sectors at the core of the

industrial system such as manufacturing or light industry have suffered the most. The Kazakhistani economy has in fact polarised towards the two tails ends of raw materials (oil and gas) on the one hand and consumers services (health, education and retail trade) on the other hand. Hence, the multiplicatory role that sectors such as manufacturing can play in an industrial reprisal has been seriously undermined. The reprisal of sectors such as oil and gas remains linked to external factors such as FDIs and international oil prices while it will hardly contribute to address employment issues. Therefore, the potential for employment generation in the industrial sector remains limited in the foreseeable future and workers understand and adapt to such scenario by finding alternatives to employment in enterprises.

Chapter 4 illustrated first the changes occurred in the labour market during the transition. An unprecedented population crisis including a sharp rise in mortality, a strong decline in birth rates and large migration flows proves that the economic crisis has affected deeply and with long-term consequences the population of Kazakhstan. Between the two censuses carried out in 1989 and 1999 respectively the population of Kazakhstan declined by approximately 1m people while an estimated 8.3m people (more than half of the population) changed residency through emigration, immigration or internal migration between urban and rural areas. Historically, crises of such proportions have been observed only in times of wars, famines or natural disasters.

Employment declined in all sectors of the economy with one notable exception, trade and catering. This sector grew significantly in terms of workers witnessing a true reallocation of labour from other sectors of the economy. The process of privatisation has determined a growth of the private sector in almost all sectors of the economy but there is little evidence that there has been a significant growth of a new private sector imagined as a group of newly born entrepreneurs who set up an enterprise with employees producing goods or services.

Instead, the most visible phenomenon in employment has been a sharp growth of self-employment. This emerged partly as a consequence of the privatisation

process of large state distribution networks and collective organisations (shops sold to individual households or farm land allocated to households) and partly as a migration of workers from enterprise employment in various sectors of the economy to self-employment in the trade and catering sector. It was shown from survey data that this sector is largely represented by traders and service providers and that the value of assets of such businesses is rather small. These are small activities with little capital investment that generate small cash flows and little savings.

Underemployment is also a major phenomenon with more than 40% of the employees not paid and more than 15% not working at all. The general survey on satisfaction and expectations offered by the 1996 KLSMS showed that there is a high level on insecurity on the part of the employed. On the other hand, unemployment had reached between 11% and 13% of the labour force by 1996. Only one third of the unemployed were registered at the state employment offices while the majority of workers were seeking work by themselves. In fact, the resources available and the service provided by the employment services are poor. Unemployment benefits reach a very small part of the unemployed and their value shows that they cannot perform the income maintenance role they were designed for.

In sum, the economic crisis has been fully reflected onto the labour market. This is visible not only in terms of growth of unemployment but also in terms of migration of labour, underemployment, job insecurity and the growth of a self-employment sector of subsistence.

Once we turned to analyse the reallocation of labour occurred in Kazakhstan between 1990 and 1996, little evidence was found to support the initially expected trend of a reallocation from declining state enterprises in traditional sectors to growing private enterprises in modern sectors. The high labour turnover observed seems to be the outcome of high labour instability. Workers changing jobs within enterprises, the same workers quitting and re-entering the same enterprise,

immigrants replacing emigrants, the creation of new entities out of old ones seem to be some of the possible explanations for a high labour turnover in an environment where almost all economic sectors declined. Also, the relationship between output, employment, productivity and relative wages, at least from the macro picture presented, seems to be very confused and certainly not in line with orthodox economic theory. An analysis of the major possible forms of rigidities in the labour market such as minimum wage, reservation wage, trade unions, and social contributions payable by enterprises could not explain a reduced mobility across sectors. In fact when people wish to move by migrating or changing status (becoming self-employed for instance) there seem to be no obstacles to these trends.

Chapter 4 concluded by raising some important questions about the true causes of the reallocation of labour towards self-employment and chapter 5 attempted to address some of these questions by comparing income and the characteristics of workers found in the different sectors. It was found that income in the state sector is lower than in other sectors while the difference in income between the private and self-employment sectors is much less visible. Most of the workers found in the private and self-employment sectors are likely to come from the state sector but such movement does not appear to have resulted in a selective allocation of workers based on personal characteristics such as age and education. Where workers live (urban or rural areas, rich or poor areas) and household attributes seem to be more important factors in differentiating workers found in the private and self-employment sector. The private sector also seems to 'ration' the unemployed more than the self-employment sectors.

The economically inactive pool, represented in the study by the discouraged unemployed and the housekeepers, also showed to possibly contribute to explain labour changes. The discouraged unemployed seem a very similar group to the unemployed. The difference between the two groups is determined by whether respondents were actively seeking work during the month before the survey or not. Obviously, many individuals seek work actively only occasionally given the

generally poor labour market conditions and, as a consequence, the unemployment rate is very much affected by the 'mood' of these workers. Also, while some women in urban areas may be rationed from entering employment because of education, women with children are now clearly confined to housekeeping which it was not the case during Soviet times. Women voluntarily leaving employment to take up home duties has been a rather well documented process in most transitional economies. Flows in and out of economic inactivity were observed in the macro data as a constant phenomenon throughout the period considered and the micro survey data show that location and household attributes are important elements in explaining such flows.

These results conform to a scenario where the private sector is mostly a 'privatised sector' with limited access and constrained growth and where self-employment acts as a possible alternative for many groups of people including those exiting the state sector, the unemployed and the economically inactive. Self-employment has been identified as an important safety net for workers in search of better opportunities, with the wish of taking control of their own welfare or just pushed into this sector by the lack of viable alternatives. For most of these workers this path seems a defensive strategy and an escape from poverty and destitution rather than a 'gold rush'.

The long-term implications of such developments are uncertain. Many of the workers found in self-employment have professional skills that they are not using, thus impoverishing the human capital stock that was available at the outset of transition. There is little accumulation in the sector and, if savings are made, they are not deposited into banks given that households do not use banks. Thus, there is little chance for this sector to generate a process of accumulation and growth. This may contribute to explain why the economy can stay in the adjustment phase for such a long period. While unemployment may not grow indefinitely as foresaw by Blanchard (1997), self-employment may well grow indefinitely. That is because, if the current trends continue, the government's revenues will continue to decline and so will the government's capacity to provide for the unemployed pushing this

group to seek alternatives. Given that the state sector does not restructure and continue to lose workers and given that the private sector is characterised by entry barriers and constrained growth, self-employment becomes for many the only option in the long run. As this sector expands, the economy moves towards informality, illegality, small and unorganised forms of production in selected sectors such as petty trade, personal services and food production.

Chapter 6 addressed some of the policy questions arising from such a prolonged labour market crisis and adjustment phase. Labour market policies have been originally designed to combat labour markets affected by significant rigidities and then 'exported' first to CEE and later to CIS countries. Although some rigidities may exist especially in the form of poor housing markets, the core of the employment problem rests with the enterprise and the current incapacity of industry to re-activate production. Therefore, policies aimed at targeting the supply side of the labour market (the unemployed) deal with the consequence and not the primary cause of the problem. Moreover, these policies have proved to be not sustainable in the long run given the growing number of unemployed and the declining government revenues.

If we are willing to take a broader perspective on the 'victims' of the transition we find many new pockets of poor that are not reached by labour market or social policies in the broad sense. Thus, in a time of severe budget constraints, the best strategy seems to concentrate resources on a few targets that can offer a certain degree of equity. Targeting the poor seems to respond to such need. Poverty is becoming the main social issue emerging from the process of transition and poverty alleviation is the new agenda of reforms. This is what the government of Kazakhstan is recently coming to terms with as witnessed by the fact that social policies are currently being re-directed towards the poor.

The first ten years of transition in Kazakhstan have resulted in a convergence towards a third world scenario rather than the first. Poverty alleviation and development strategies are progressively becoming the new jargon of policy

making and the transition debate is leaving the ground to a development debate. It is no longer a question of pushing transitional reforms through but a question of tackling issues such as good governance, corruption, grass-root development and industrial strategies. These are the kind of issues amply explored in the development literature constructed on the experience of developing countries. Perhaps one of the important lessons emerged from this literature is that a process of development is a long-term process centred on human capital development. As human capital was the main comparative advantage that former Socialist economies had at the outset of the transition process, the loss of such capital entailed by the growth of self-employment is one of the obvious pressing problems emerging from the current stagnation.

Appendix

The 1996 Kazakhstan Living Standards Measurement Survey (KLSMS)

The 1996 Kazakhstan Living Standards Measurement Survey (KLSMS) was carried out in July 1996 by the Sigma Institute of Berlin in collaboration with the Committee for Statistical Analysis of the Republic of Kazakhstan (CSAK) and under a World Bank social protection technical assistance project.

The survey followed general guidelines for World Bank LSMS surveys. It was administered to 1996 households and 7224 individuals. It is a sample survey, nationally representative and reflects the social and territorial distribution of the population. The key criteria to identify the sample were as follows:

Table A1 – Survey design

	Large cities	Villages and small cities	Rural areas	Total
No. of inhabitants	6,177,000	3,072,792	7,182607	16,432,399
Portion of inhabitants	37.59	18.69	43.72	100
Number of HHs	2,130,000	883,015	1,695,262	4,708,277
Portion of HHs	45.23	18.75	36.02	100
Average quantity of HH	2.9	3.47	4.23	3.49
Number of PSU	90	38	72	200
Sampling fraction	23,666	23,545	23,545	

Source: CSAK (1996c); Sampling fraction = No. of HHs/No. of interviewed areas (PSU – Probability Sample Unit)

The survey has three components: A community, a family and an individual questionnaire. All interviews were carried out using personal interviewing methods. The community questionnaire included five sections: Demographic information, economy and infrastructure, agriculture, education and health care. The family questionnaire included five sections: information on family, housing conditions, agriculture and cattle breeding, expenditures and consumption and income. The individual questionnaire included six sections: General data and migration, education, care of children, occupational status and labour, medical services/health assessment/women and time budget. The community questionnaire was discussed with members of the regional administration responsible for the

various topics covered. The family questionnaire was discussed with the head of the household or with the person available more knowledgeable about the household. Questions for the individual questionnaire were discussed with all grown-ups (over 16 years old). Normally one interviewer was assigned to one PSU, usually comprising ten households.

Labour categories

In line with ILO recommendations, I started by counting the employed including the largest possible number of respondents in order to capture anyone who, during the 30 days before the survey, had performed any economic activity, paid or unpaid. The questionnaire offered several questions to identifying the employed. Therefore we considered employed any respondents who replied positively to any of the following questions:

a. Did you do any work for money or were you involved in any professional business during the past seven days?
b. Have you got a job or business and were you temporarily not at work during the past seven days?
c. Did you do any unpaid work for relatives during the past seven days?
d. Did you participate in farm activities or were you involved in selling products during the past seven days?
e. Are you currently employed by an enterprise, organisation, collective farm or cooperative (past 30 days) ?
f. Who owns the enterprise?[1]

1. *The state*
2. *Public department or administration*
3. *Public organisation*
4. *Municipality*
5. *Workers of the enterprise*
6. *Collective farm and other cooperatives*
7. *Private owner, private company*

[1] All respondents to this question were included. The reason is that more respondents replied to this question than those who declared to be employees. We assumed that if a respondent replied to the question the person is in fact employed.

8. A foreigner
9. A foreign company
10. Other

g. Do you run your own business?
h. Did you do anything else during the past 30 days that you have not told yet and you were paid for? Maybe you sewed a dress, gave a lift with your car, assisted in house or car repairing, bought and transported food, looked after a sick person, or did anything else you were paid for.

From the total number of employed we then separated the employees including all respondents who declared to work for any entities (questions 'g' and 'f') but excluding those who, in a subsequent question, declared to own the enterprise where they work. We called this latter group 'owners of enterprises' and we included it into self-employment. State employees are those who answered question 'f' with answers 1 to 4. Private employees are those who replied with answers 7, 8 or 9. A category called 'members of collective organisations' was created to include respondents from question 'f' who replied with answers 5 and 6.

'Owners of enterprise' includes those who replied positively to the question *'Are you the owner of the enterprise where you mainly work?'* Single owners of enterprises as well as respondents who felt they owned the enterprise where they work maybe because they own shares are included in this category. In any case, it was felt important to distinguish this category from the employees because of ILO recommendations and because when it comes to measuring income those who declared to own the enterprise where they work are likely to either set their own income or participate in the income setting process.

Question 'g' allowed identifying the 'business owners'. A set of further questions allowed subdividing the business owners into four categories; traders, goods producers, services providers and others. Question 'h' identified a group that we called 'other services providers'. Both categories were included into the self-employed. From the total number of employed initially counted we subtracted the

employees, the owners of enterprises, the business owners and the other services providers. We obtained a residual of 125 observations. These were cross-tabulated with questions 'a' to 'd' so that four more categories were created as 'other professionals' (a), 'other employed not at work' (b), 'other unpaid work' (c) and 'others farming or trading' (d). Other professionals were so labelled because having replied positively to question 'a' they did not reply to any of the questions on the employees. Therefore this group may capture professionals or self-employed which the questionnaire does not identify with other questions. These last four categories were all included into self-employment. Technically 'other employed not at work' could be either employees or self-employed and we could not distinguish between the two. However, the group contains only 11 observations and we decided to include it into the self-employed together with a final residual of seven observations not classifiable. In conclusion, we created 15 employment categories 2 for the employees 1 for the members of collective organisations and 12 for the self-employed.

The above categorisation was used in chapters 4 and 6 while in chapter 5 the self-employment category was reduced to the goods producers, traders and services providers for comparative purposes while the members of collective organisations were not included into the analysis as this sector is not a product of the transition process but heritage of the Soviet system, therefore beyond the issues tackled in the chapter. This means that farmers are not included because most farmers are still part of some form of collective organisation necessary to manage collective assets that could not be given to individual households in the course of privatisation such as large pieces of land or heavy machinery.

Variables

The discussion on income measurement was provided in the text as well as some of the descriptive statistics for the variables used. Below a description for each variable is given.

Formal wage: This is derived from question d_019 of the occupation section of the questionnaire. The question is *'What is your official salary at the main workplace?'* and it was addressed to all employees. Answers were provided in tenge and are relative to the month before the interview.

Income: This is derived from question d_124 of the occupation section of the questionnaire. The question is: *'How much money did you get during the last 30 days including salary, bonus, profit, pension, allowance, occasional earnings and other money income (including in hard currency, but converted the latter into tenge)?'* The question is the only question on income that was addressed to all the employed as well as to the pensioners.

Income per hour: This is income as described above divided by the number of hours spent at work as reported by all respondents in the time budget section of the questionnaire. The question in the time budget section was: *'How much time did you work excluding time to go to your job place, the way back and lunch breaks during the last 7 days?'* The question was addressed to all adult respondents who declared to work in the specific question addressed in the time budget section. Answers were given in hours and have been multiplied by a factor of 4.3 to obtain the average number of hours worked per month.

Age (years): This was calculated as a difference between the date of birth of the respondent and the date of the questionnaire. Date of birth was provided in the general data/migration section of the questionnaire.

Education (years): This comes from the education section of the questionnaire. It is the sum of the answers to the following two questions: *1. How many forms did you finish at school?; 2. How many years were you training after school?* By school it is meant the compulsory primary cycle and by training it is meant vocational, secondary and higher education.

Regional employment rate: This is calculated as the number of employed divided by the labour force (employed plus unemployed) per region (oblast). How the employed were calculated is described in the section above on labour categories. How the unemployed were calculated is described in the text, chapter 4, section 2.5 'Unemployment'.

Regional average annual consumption per capita: Household annual consumption per capita is a variable constructed from the expenditure section of the questionnaire by Kinnon Scott at the World Bank in Washington and kindly provided to me. Regional average annual consumption per capita is simply the average of this variable by region. This is meant to represent regional welfare.

Logarithm of household annual consumption: This is the natural logarithm of the household annual consumption variable also provided by Kinnon Scott at the World Bank and constructed from the expenditure section of the questionnaire.

Household number of children: This is the number of children in each household aged 13 or less.

Dummies: 'Women', 'urban', 'age 14-25', 'head of household' and 'household owns a car' are all dummies.

Table A2 shows average, standard deviations, minimum and maximum values and information on how the variables were constructed for all variables used in chapter 5.

Table A2 - Chapter 5 variables

variable	Obs.	Mean	Stand. deviat.	Min	Max	Construction
formal wage (all employees respondents)	2495	5006	4572	0	65000	
income (all employed respondents)	2766	4571	8215	0	200500	
women	7203	.5217271	.4995624	0	1	
age (years)	7224	30.03638	20.02608	0	96.39425	
age squared/100	7224	13.03172	15.04409	0	92.91851	
age 14-25	7224	.231866	.4220531	0	1	
education (years)	7224	7.628738	5.680913	0	20	
urban	7224	.4919712	.4999701	0	1	
regional employment rate	7224	59.84189	7.280243	46.80851	74.71265	E/WAP*100 by region
regional average annual consumption/capita	7224	54.28233	14.83749	29.82336	82.23235	Regional mean of ln of yradjpc
head of household	7224	.2763012	.4471985	0	1	
household number of children	7224	1.204457	1.157356	0	7	
ln household annual consumption	7222	10.68772	.6615027	7.700655	13.185	Ln of household annual consumption
household owns a car	7224	.2257752	.4181207	0	1	

E = Employed
WAP= Population in age 14-60 or employed
yradjpc = yearly consumption per capita adjusted with regional price indexes (variable provided by the World Bank)

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[1]The symbol (R) stands for documents originally in Russian

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