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No. 9

The continuing employment crisis in Kyrgyz manufacturing

**Analysis of findings from the second round of the Kyrgyz
Republic survey of manufacturing establishments
1993-1995**

Christine Evans-Klock

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Foreword

In 1993, with the support of the United Nations Development Fund, the International Labour Organization conducted the first survey of manufacturing enterprises in Kyrgyzstan. The findings documented massive dislocation within the manufacturing sector of the Kyrgyz economy during the first years of the transition to a market-based economy. In 1995 a follow-on survey of the same manufacturers was conducted to investigate the employment impact of the continuing privatization programme.

The analysis of the findings from the second Kyrgyz Survey of Industrial Establishments reveals that two more years into the privatisation process, the Kyrgyz economy has not yet managed to stem the job haemorrhage, much less turn the corner to output growth and job creation. The report documents that the rate of job loss in the surveyed establishments had accelerated and yet managers continued to report a surplus of workers. The survey findings, and fieldwork conducted in Bishkek in 1996, are used to compare performance between privatised and state-owned establishments and to identify the most important constraints on the ability of manufacturers to increase production and generate jobs.

The surveys in the Kyrgyz Republic were undertaken as part of a series of establishment surveys in several transition economies to document the employment impact of enterprise restructuring. This paper builds on the analysis of these previous surveys, including of Russia, China, and, in particular, the first round of the enterprise survey in the Kyrgyz Republic, written by Jim Windell, Richard Anker and Gyorgy Sziraczki.

The survey was carried out by the National Statistical Committee with oversight and direction provided by Jim Windell, then ILO Advisor to Central Asia. Many thanks are due to Natalie Gudkova, director of the statistics unit of the NSC, for conducting the survey and preparing the data files and to her staff for arranging the fieldwork. Comments on the first draft provided by Richard Anker are gratefully acknowledged. Smita Barbattini was responsible for preparing the figures. Cheryl Wright prepared the manuscript.

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Executive Summary

The first round of the Kyrgyz Republic Survey of Industrial Enterprises was conducted in mid-1994. Because of the severe fall in industrial employment documented in the first survey, a follow-up survey was carried out a year and a half later, in September 1995. The two surveys combined provide a five-year data series which describes in detail the extent of enterprise restructuring and the resulting changes in the number of jobs and quality of employment in the manufacturing sector. Analysis of the survey findings concentrates on three questions:

First, what is the current state of employment in Kyrgyz manufacturing? In particular, has the sharp decline documented in the earlier survey bottomed out and is there optimism that production, and job creation, will improve?

Second, how does the performance of privatized establishments compare with those still in the state sector? Has the privatization of Kyrgyz industry been accomplished in such a way that has both motivated and enabled managers to improve productivity, sales and employment?

Finally, what conditions in the overall economy constrain establishments' growth and what are the implications of their experiences for creating a public policy environment more conducive to establishment growth and job creation?

The survey findings are sobering:

- C One out of every two workers employed by the surveyed manufacturers in 1991 had lost their job by 1995. The latest survey suggests that job loss in manufacturing has continued unabated, with a 15 per cent drop in employment in 1995 alone.
- C Even these numbers do not show the full extent of the employment problem: One third of the respondents reported that they were employing more workers than they needed and could use productively. Seventy per cent of the surveyed establishments owed their workers back wages. Of all workers counted as employed in 1995, one out of three had been placed on extended leave during the year, with or without pay, and one out of four had been placed on short workdays or work weeks by their employers.
- C While not apparent in the first survey, the unemployment burden now appears to be falling disproportionately on women. Two thirds of all jobs lost in 1994 and 1995 had been filled by women.
- C Employers were not optimistic that their production and demand for labour would turn around. Of the 232 establishments surveyed, only 7 per cent said they expected to increase employment in the next year.

In the survey responses and interviews with plant managers, three principal factors explain the sharp fall in production and employment:

First, the supply networks for raw materials have been severed, having been based on non-economic trade patterns under the Soviet regime. This problem is endemic across CIS republics, but is particularly severe for the Kyrgyz Republic because of its remote and land-locked location.

Second, development of national institutions and policy has been unequal to the task of establishing and implementing fiscal policies conducive to business growth. While succeeding in bringing down rampant inflation in 1993-94 to 2 percent per month in 1996, fiscal and trade policies remain in flux and are not conducive to recovery of manufacturing output. Plant managers identified stable markets, less restrictive taxation policy, and establishing new business finance institutions as

the critical factors determining their future prospects.

Third, the managers trying to cope with these problems had no experience dealing with uncertainty under the old regime. Although none of the managers interviewed in the field work expressed a desire to return to the command economy, many revealed that their concept of management had not changed: Given a production target, they could “manage” the technical, physical, engineering, and human resources necessary to achieve it. But having to search for buyers, being on their own to find suppliers, and trying to improve product quality to export standards were all new managerial tasks.

Against all these negative trends, one highly-promoted change has by and large occurred: there has been a marked shift from state-owned to private property forms. The share of state ownership of the surveyed enterprises dropped from 42 percent in 1993 to 26 percent just two years later. The survey findings show that change of property form alone is not associated with better performance at the establishment level in terms of sales, entering new markets, employment growth or training. In each of these areas, there is no statistically distinguishable difference between the behaviour or performance of privatized establishments and that of state-owned establishments. While necessary, changes in ownership structure and profit incentives are hardly sufficient conditions for surmounting the constraints imposed by disruption in input and output markets, the absence of a stable and sound policy framework, and the lack of managerial training.

Official policy has also been strong in encouraging establishments to become more competitive and profit-oriented by shedding non-productive activities, such as providing utilities to communities and social services to their workers. But so far it is falling far behind in replacing manufacturers’ social services with “public” utilities, transportation infrastructure, kindergartens and clinics.

The report begins by describing the survey of Kyrgyz manufacturers and characterizing the respondents by size, region and industrial sector. Section 2 documents the continuing fall of employment and compares job loss across groups of establishments and groups of workers. Section 3 examines the extent of hidden unemployment, in terms of surplus workers and the practices used to manage the problem of excess supply of labour in the workplace. Section 4 compares the sales and the employment performance of privatized and state-owned establishments. Section 5 continues this comparison on qualitative aspects of employment such as training, social services and discrimination. Managers’ perceptions of their main business problems form the basis of a brief overview of policy priorities to improve the job creation potential of Kyrgyz manufacturers in Section 6.

1. Introduction

Landlocked between Kazakhstan and China, the Kyrgyz Republic is one of the most isolated of the Republics of the former Soviet Union. Markets for its products and supplies were lost with the dissolution of the Union. Difficulties in renewing these ties, entering new markets and privatizing manufacturing and agricultural production resulted in severe economic depression¹:

Ⓒ The fall of GDP was arrested only in 1996, after a decline of 40 per cent since 1991.

Ⓒ In 1996, production in light industry equalled one third of its 1991 level. Food production was reportedly down 80 per cent.

Ⓒ Consumer prices increased 4 times faster than wages during this period. Real wages in 1996 were estimated at 26 per cent of the 1991 level.

It is against this backdrop that survey data documenting the employment impact of restructuring within enterprises is to be examined.

1.1 Survey of Kyrgyz manufacturers

The first round of the Kyrgyz Survey of Industrial Enterprises was conducted in mid-1994² and the follow-up survey was carried out a year and a half later, in September 1995. All establishments surveyed in the first round were included in the follow-up survey. Of the original 244 enterprises surveyed in the first round, 230 were found to be still in operation, and only two new manufacturing enterprises were found to have entered into operation.³

The surveys covered almost all manufacturing enterprises with at least 40 employees in the principal industrial regions of the country: the capital city Bishkek; Chu Oblast, the valley surrounding Bishkek in the northern part of the country, and the Osh Oblast in southern Kyrgyzstan, including the cities of Osh and Jalal-Abad. Because this was an attempt to survey the population of establishments in these regions, it was not necessary to stratify by industry or other characteristics. Establishments were identified through records of the National Statistical Committee, which also administered the surveys.⁴

However, the results of the survey should not be construed to represent the entire economy nation-wide. Rather, the evidence describes in detail the extent of enterprise restructuring and the resulting changes in the number of jobs and quality of employment in the manufacturing sector. It should be noted that the survey did not cover areas outside these two regions of the country, for

¹Statistical Committee of the CIS, 1997.

²For a complete analysis of the first enterprise survey, see Windell, Anker and Sziraczki, *Kyrgyzstan: Enterprise restructuring and labour shedding in a free-fall economy, 1991-1994*, ILO, 1995.

³The striking absence of new businesses established by private owners during the privatization process was also noted by Jermakowicz and Pankow, "Privatization in the Kyrgyz Republic," *Russian and East European Finance and Trade*, 1995.

⁴In both surveys, information was collected from enterprises in two stages. Part one of the questionnaire, covering basic employment, wages, and production, was completed by the plant managers on the basis of enterprise records. The second part was filled in during a structured interview with plant managers conducted by staff of the National Statistical Committee which covered management practices, future expectations, and training and recruitment practices.

logistical reasons, and that it was limited to manufacturing enterprises. In 1991, the manufacturing sector accounted for about one-fifth of national employment -- about half as many workers as were employed in agriculture.

The two surveys combined provide a five-year data series representing the general trends in the Kyrgyz manufacturing sector. Most of the analysis focuses on change from 1993 to 1995. However, employment data was collected for the pre-transition point December 1991 against which the effect of changes launched by the breakup of the Soviet Union can be measured. The statistical data is supplemented with findings from a small set of interviews with plant managers conducted in Bishkek and the Chu Valley in August 1996. Information originating in the two rounds of the Kyrgyzstan Survey of Industrial Enterprises is identified in the following tables and figures as KSIE I and KSIE II, respectively.

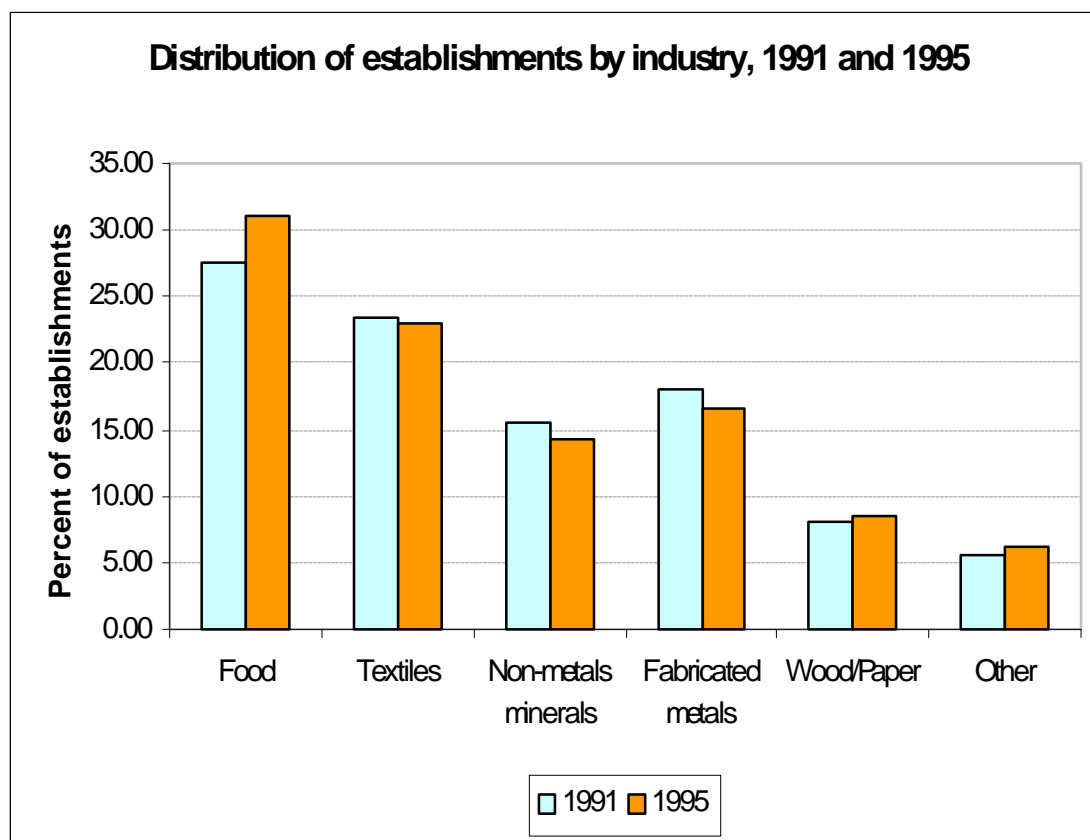
1.2 Characteristics of surveyed establishments

Establishment performance can differ markedly depending on industry, initial size, and region. Before turning to the employment and restructuring questions, it is useful to characterize the surveyed establishments by these basic attributes.

The industrial composition of the surveyed firms is consistent with Kyrgyzstan's endowment of natural resources. Over half of the enterprises are engaged in processing agricultural products (figure 1). The food processing industry (including beverages and tobacco products) accounts for a third of all establishments and is the only group to have registered a slight increase in share of manufacturers since 1991. Textiles and apparel, including footwear, is the second largest group of establishments, followed closely by fabricated metals.⁵

⁵For the analysis of the first survey, Kyrgyz industrial codes were translated and grouped into categories more consistent with the International Standard for Industrial Classification (ISIC). Due to the small number of enterprises, motor vehicle and electronics were grouped in fabricated metals, construction materials (stone, cement) and plastic and rubber products were grouped together as "non-metal mineral products", and chemicals and basic metals were included in "other" manufacturing.

Figure 1. Distribution of establishments by industry, 1991 and 1995

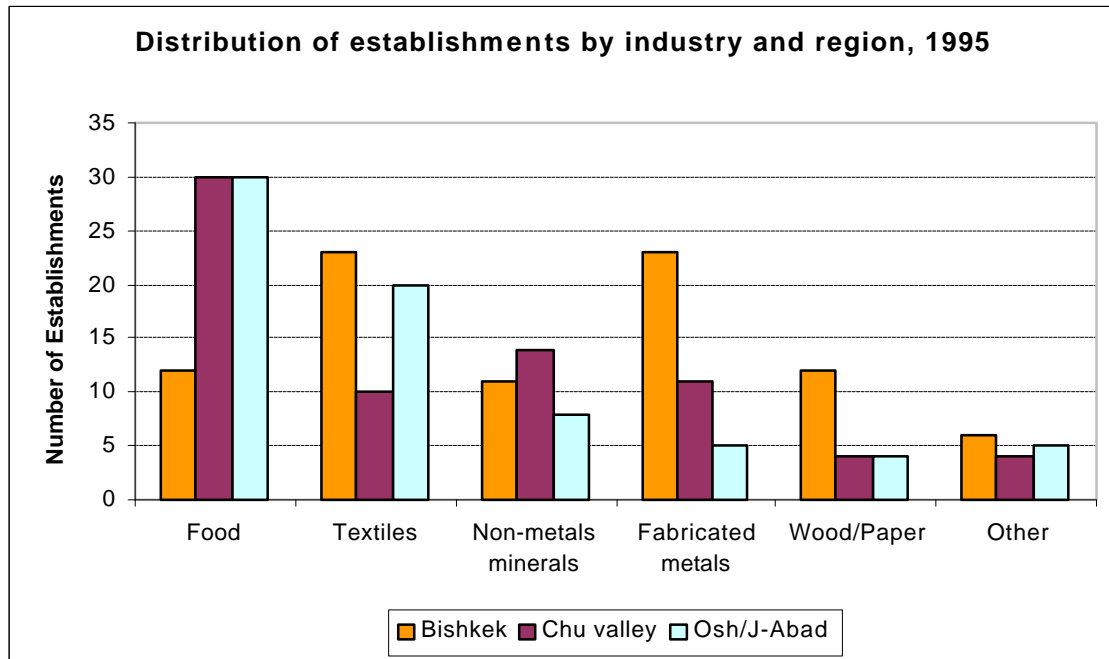


Sources: KSIE I and II, n=232

About two out of five establishments surveyed are located in Bishkek, with the rest distributed almost evenly between the Chu Oblast in the North and the Osh Oblast in the South. The textile industry includes wool and leather products in the North, and cotton and silk processing and garment-making centred in the southern part of the country. Fabricated metal processing is centred in Bishkek. Food processors are distributed almost evenly between the Chu Valley and southern Kyrgyzstan (figure 2).

The share of employment in establishments with more than 1000 employees dropped from 67 per cent in 1991 to 45 per cent in 1995 (figure 3). Only five per cent of employment was in establishments with fewer than 100 employees, but this group's share of employment in the first survey was barely 1 per cent. *This marked shift in the size structure of the manufacturing sector is likely to continue as part of the revamping of the manufacturing sector, from one characterized by very large enterprises responding to set production goals to more and smaller producers responding to diverse national and regional markets.*

Figure 2. Distribution of establishments by industry and region, 1995



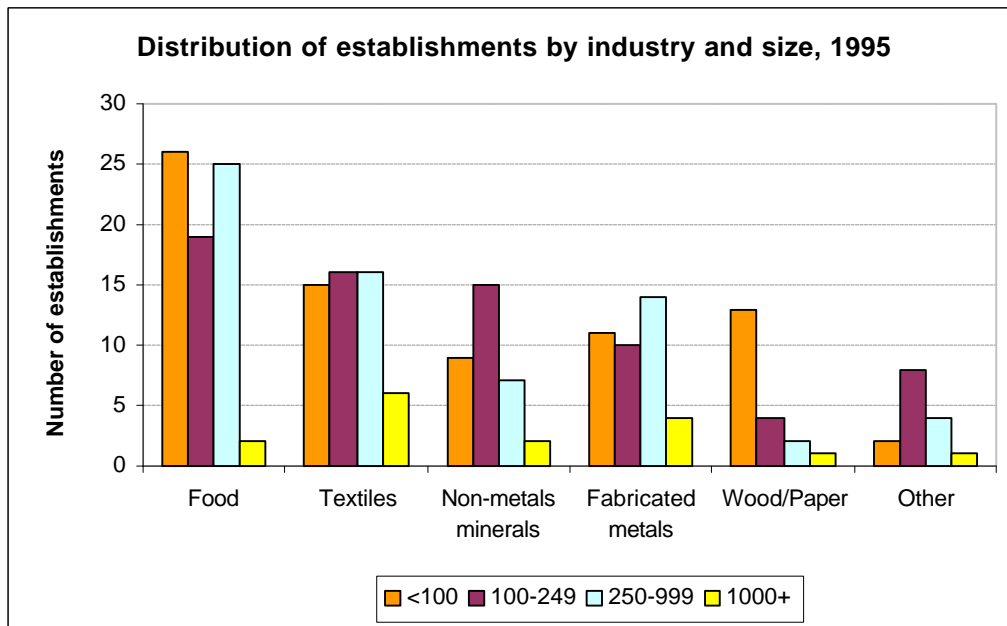
Source: KSIE II

Figure 3. Distribution of employment by size class, 1991 and 1995



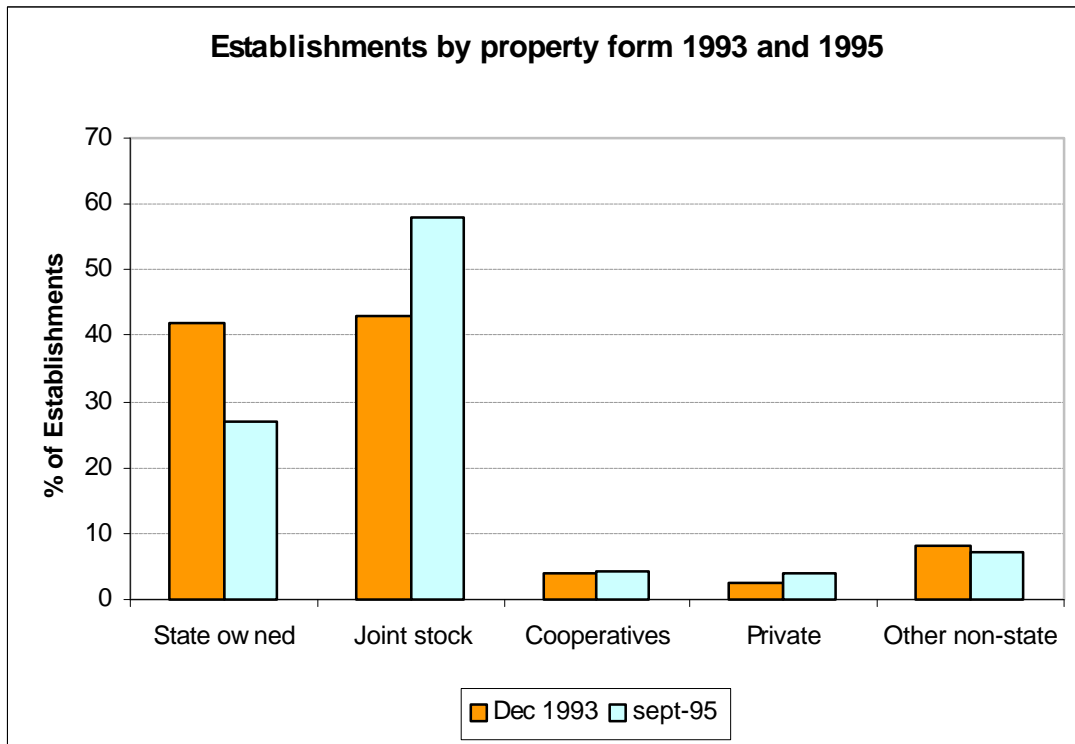
The food and textiles industries are characterized by a very even distribution of large and small enterprises, using number of employees as the measurement of size. Establishments with fewer than 100 employees are out-numbered by medium-sized establishments in only fabricated metals and non-metals processing. The largest establishments, those with more than 1000 workers, are concentrated in textiles and fabricated metals (figure 4).

Figure 4. Distribution of establishments by industry and size, 1995



Source: KSIE II, n=232.

There has been continued movement of industry away from direct state control of manufacturers. In 1991, 75 per cent of the establishments were state-owned, and another nine per cent were owned by the state but “leased” to their managers or workers. The portion of state-owned establishments had dropped to 42 per cent by the end of 1993 and to 26 per cent by September, 1995 (figure 5).

Figure 5. Establishments by property form, 1993 and 1995

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KSIE I and II.

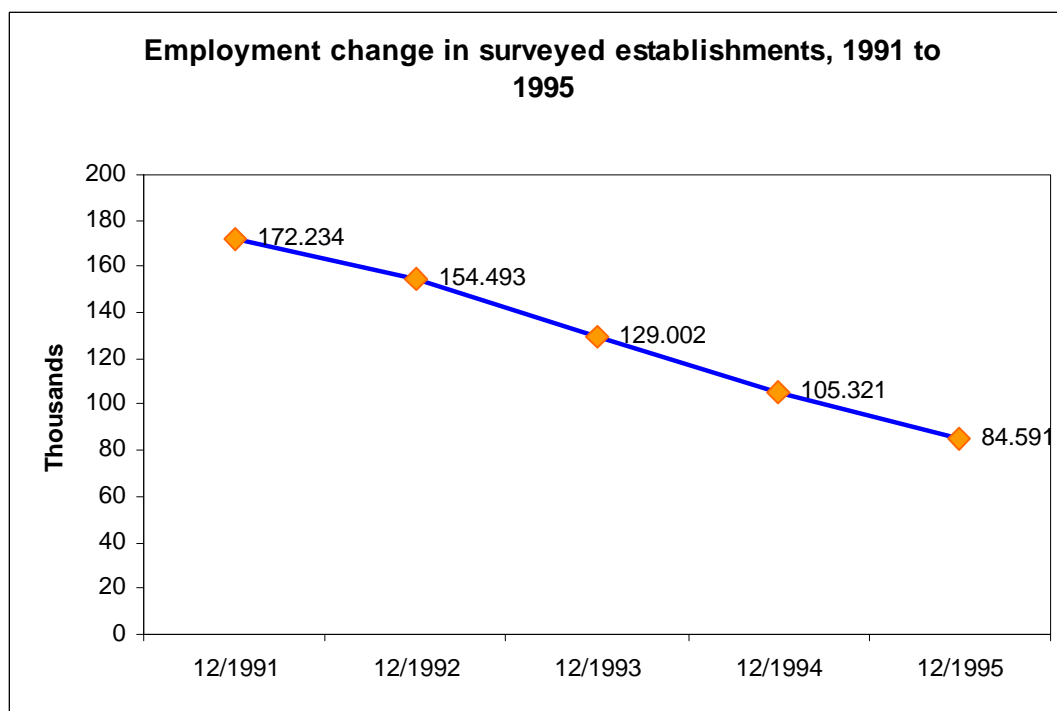
c e s :

As explained in the previous report, the most popular form of privatization has been to “sell” state-owned plants to managers and workers in the form of closed joint-stock companies. In 1995 these accounted for about 60 per cent of the establishments surveyed. Other types of property forms accounted for a small minority of the surveyed establishments: 4 per cent owned by private individuals, another 4 per cent owned by workers in the form of cooperatives, and 3 per cent limited liability partnerships. Notably, not one of the surveyed enterprises was a joint venture with a foreign partner.

2. Job displacement

Employment in the surveyed establishments fell by half between 1991 and 1995. Measured employment fell from 172,000 at the end of 1991 to just below 90,000 in September 1995, a drop of 48 per cent (figure 6). Of the 130,000 people employed in these establishments in December, 1993, one out of three was no longer employed there 21 months later.

Figure 6. Employment change in surveyed establishments, 1991 to 1995



* Estimated from survey data - see note to table 1
Sources: KSIE I and II, n=232.

The first round of the KSIE documented a decrease of employment by one-third, from 1991 to mid-1994, in the surveyed establishments -- a decline characterized as a “free-fall economy.” *The follow-up survey indicates that the rate at which the manufacturing sector was shedding jobs had not slowed.* Taking December 1991 as the base period, employment fell at an annualized compounded rate of 13.5 per cent through 1993, and 14.7 per cent through the third quarter of 1995 (table 1). One can estimate the end-1995 employment figure from the September 1995 data collected by the survey by assuming that job loss continued in the final quarter at the same rate as in the previous three quarters. Using this estimate, the end-1991 to end-1995 average annual growth rate would be negative 16.3 per cent. The number of jobs disappearing annually declined slightly in absolute numbers, 20,700 jobs lost in 1995 compared to 25,500 in 1993, but they represent a greater loss relative to the shrinking employment base in the manufacturing sector.⁶

⁶Just over ten per cent of the establishments surveyed indicated that they had detached a unit within the previous year. To check whether the rate of total employment decline is exaggerated by not counting employees in these detached units, their number was added back to the total and the rate of change recalculated. Counting these 2,216 jobs as transferred rather than lost results in adjusting the average annual employment decline to 15.7 per cent rather than 16.3 per cent. This change is negligible, as well as overly-optimistic considering that it assumes no subsequent job loss in the detached units.

Table 1. Employment change, 1991-1995

Time Period	Employment	Annual Change in Employment	Annual Percentage Change	Average Annual Growth Rate (relative to 12/91)
December 1991	172 234			
December 1992	154 493	-17 141	-10.3	-10.3
December 1993	129 002	-25 491	-16.5	-13.5
December 1994	105 320	-23 682	-18.4	-15.1
September 1995	89 772	-15 548		
December 1995*	84 590	-20 730	-19.7	-16.3
December 1995 + employees in detached units**	86 806			-15.7

*The end-1995 employment figure was estimated from the September 1995 figures collected in the survey by assuming a constant quarterly rate of change.

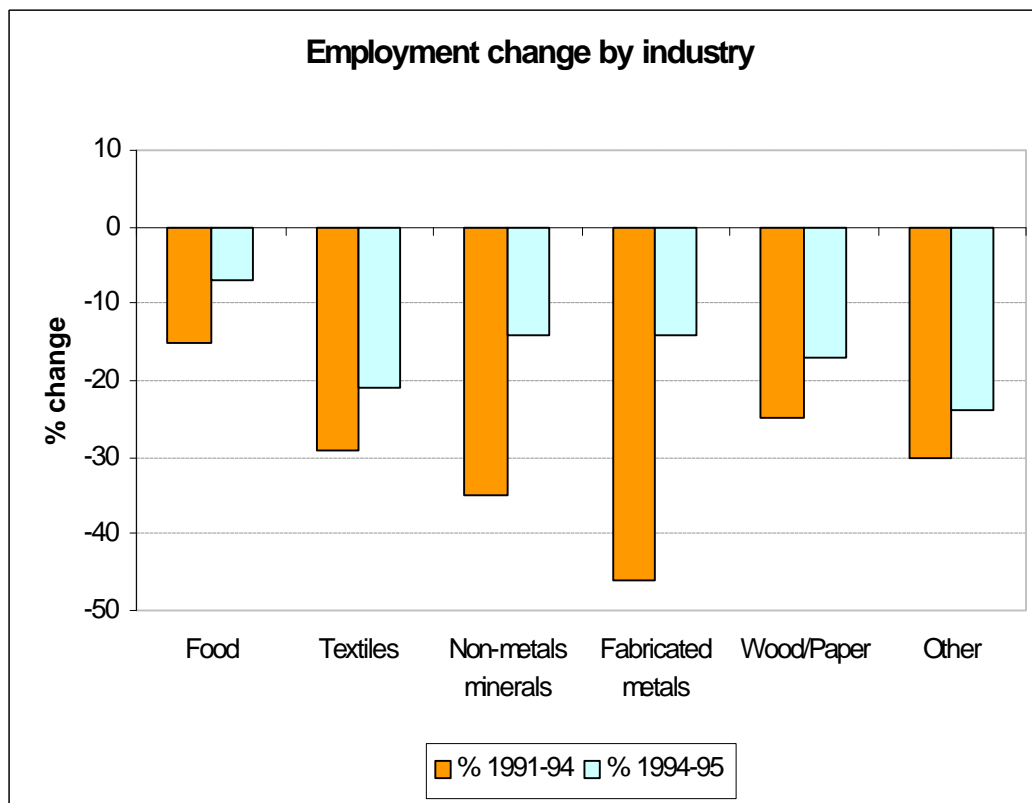
**Re-estimated total employment assuming that all workers in detached units were still employed in newly-independent or recombined establishments.

Sources: KSIE I and II, n = 244 in 1993; 232 in 1995

2.1 Where job loss has occurred, employment change by industry and region

The loss of jobs has been highest in heavy industry. The sharpest decline documented earlier was in fabricated metals, where employment fell by 45 per cent from 1991 to 1994, followed by 35 per cent in building materials and rubber and plastics (non-metal mineral products). This was largely explained by the need for industrial restructuring as the country moved away from manufacturing “assigned” to it by the Soviet Union to a structure driven more by market forces which would emphasize processing raw materials in which Kyrgyzstan had a comparative advantage. Over the latest period surveyed, 1994 to 1995, the two heavy manufacturing sectors each lost another 10 per cent of their jobs, about half the job loss rate experienced in the textile industry and twice the loss rate in the food industry. Agricultural food products and wood and paper had the slightest declines, but textiles and apparel had the largest proportional decline of the principal industrial sectors (figure 7).

Figure 7. Employment change by industry



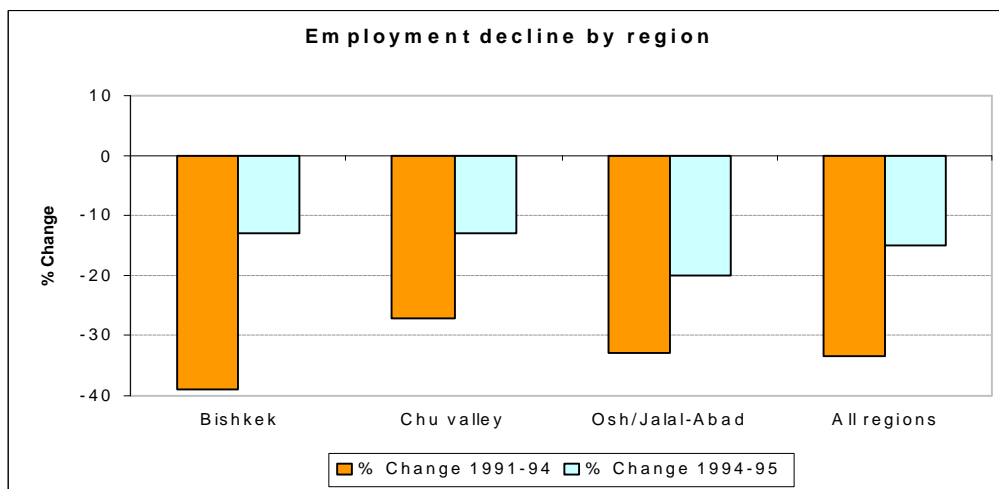
Sources: KSIE I and II, n= 244 in 1993; 232 in 1995.

Four years of drastic change have fundamentally altered the composition of industrial employment from the base period in 1991. The share of employment in food production has doubled; the share in machinery, electronics, and fabricated metals has fallen by more than a third. The share of employment in textiles and apparel and in non-metal materials has hardly changed, remaining at about 30 per cent and 10 per cent respectively. Textiles and apparel now employ only slightly more than the food sector, whereas in 1991 it provided twice as many jobs in the economy (figure 8).

Figure 8. Employment distribution by industry, 1991 and 1995

Sources:KSIE I and II.

The distribution of job displacement by industry is mirrored in the distribution by region (figure 9). The most severe loss of employment was experienced in the southern region, Osh and Jalal-Abad. One out of five jobs disappeared from surveyed establishments in this region between 1994 and 1995. This is probably mostly due to the concentration of much of the textiles and apparel industry in this region, which had the highest share of jobs lost. Employment loss in both of the northern regions, the capital Bishkek and the surrounding Chu valley, was about 12 per cent, whereas in the first three years of adjustment Bishkek had suffered far greater proportional job loss than had the Chu valley.

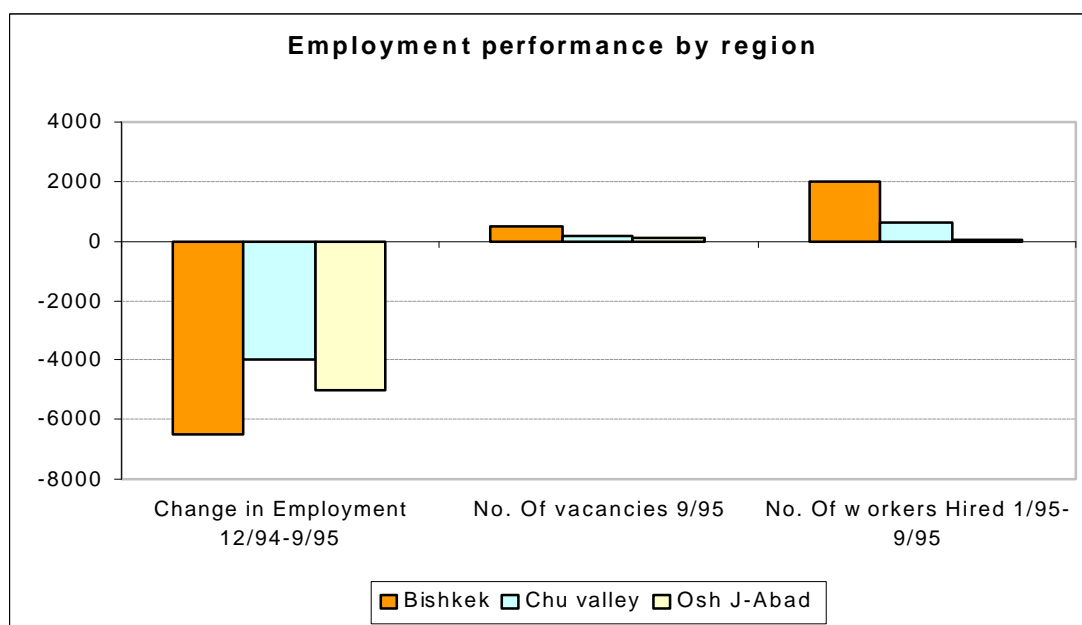
Figure 9. Employment decline by region

Sources: KSIE I and II.

Employment performance in the latest year for which data was collected, 1995, is compared across regions in figure 10. Establishments outside Bishkek reported essentially no vacancies as of September, 1995, and no workers hired in the previous nine months. Even in Bishkek, with the smallest per percentage decline in employment, there were no signs of a turn around in demand for labour, as net employment decrease was three times the number of workers hired in the first three quarters of 1995.

Although a household or labour survey would document the subsequent economic activities of workers who had been displaced, the overall net loss of jobs in the manufacturing establishments surveyed clearly shows that they had not been re-deployed to other sectors within manufacturing.

Figure 10. Employment performance by region



Source: KSIE II

2.2 Employment change by demographic group and occupation

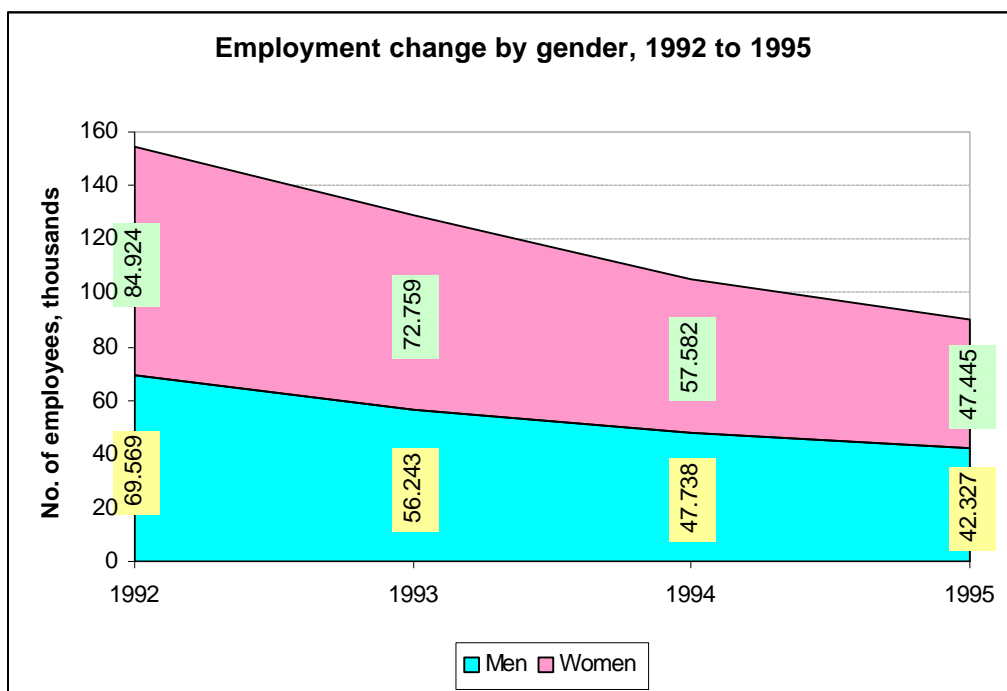
The impact of labour shedding by manufacturers appears not to have been borne equally by all sectors of the labour force. The survey data indicate that women and young persons have been particularly hard hit in the last few years. General employment trends by specific groups in the labour force are highlighted here, and further analysis of the impact of establishment restructuring on women is presented in a separate section below.

A particular feature of the Kyrgyz labour force is that more women than men have been employed in the manufacturing sector. In 1992, 55 per cent of the workers employed in the surveyed establishments were women; by 1995 their share had fallen slightly but they continued to fill just over half of all jobs (figure 11). In the early years of the restructuring, male workers lost jobs at a faster rate than did their female colleagues, 19 per cent from 1992 to 1993 for men, versus 14 per cent for

women. The following year, the data show that this had reversed: from 1993 to 1994 the number of women employed in the surveyed establishments decreased by 21 per cent, versus 15 per cent for males. The gap widened in 1995, with the number of women employed dropping by over 17 per cent versus 11 per cent for men.

As for young workers, those with newly desired skills (English, modern business training, computer skills) may be favoured relative to middle-age workers steeped only in the “old ways”. Unfortunately, access to such education and training is very limited, so for the majority of young labour force entrants the probability of finding employment in manufacturing is very low. The number of workers under the age of 25 employed by the surveyed establishments fell by 51 per cent from 1992 to 1995. Their share of the job loss has been larger than their share of the work force. At the beginning of the period covered by the surveys, young workers made up one fourth of the work force; in 1995 their share had fallen to one fifth. (See Appendix table 1 for data on youth and older workers.)

Figure 11. Employment change by gender, 1992 to 1995



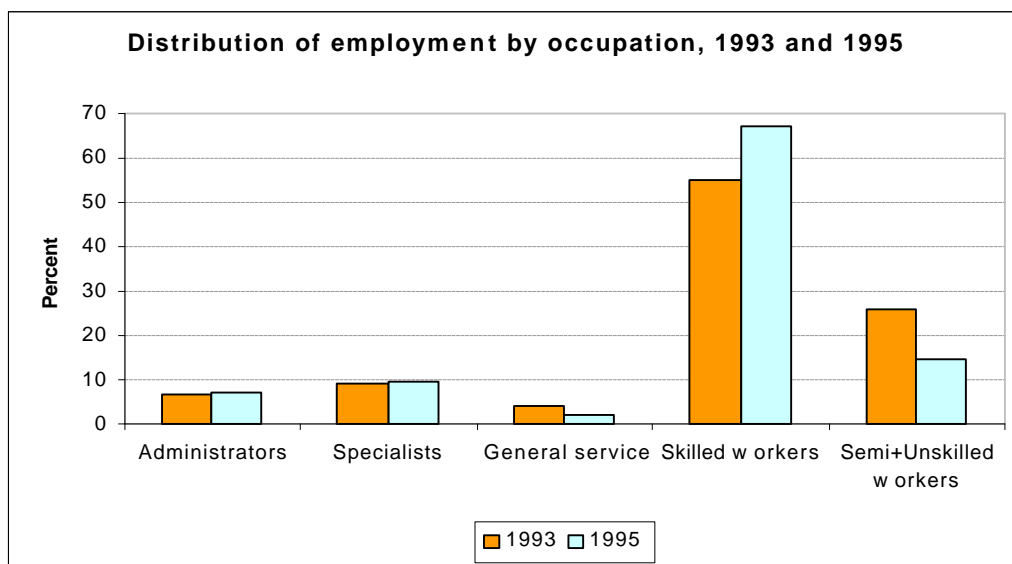
Sources: KSIE I and II

The job loss by older workers, aged 50 and above, while severe seems to be more proportional to their share of the work force. The number of workers over the age of 50 employed by the surveyed establishments fell by half from 1992 to 1995. At the beginning of that period they accounted for 14 per cent of employment and at the end for 12.6 per cent.

Kyrgyz manufacturers have demonstrated a clear tendency to dismiss least skilled workers first, or at least to try to hang on to skilled workers longer. Jobs classified as semi- or unskilled and

general service suffered the greatest decline, dropping by 60 per cent since 1993. Managers and specialists had the second largest proportional fall in jobs, each fell by one quarter over the two years. Although half of all jobs lost were classified as semi- or unskilled, this category remains the second largest occupation category. And despite the 15 per cent drop in the number of jobs for skilled workers, their share of total employment actually increased (figure 12).

Figure 12. Distribution of employment by occupation, 1993 and 1995



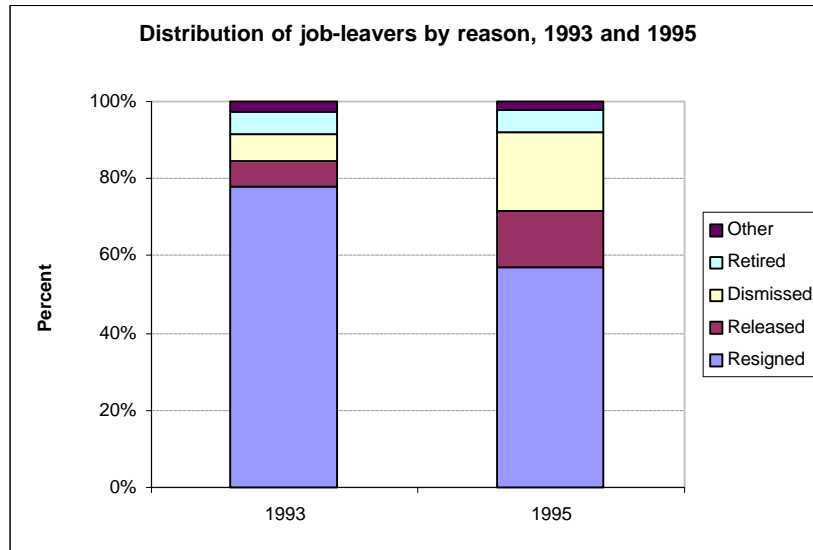
2.3 How employment change takes place

On the surface, most of this fall in employment seems to have occurred “voluntarily.” In 1995, as in 1993, survey respondents indicated that the majority of job-leavers had resigned, defined as leaving by their own choice, as opposed to being dismissed (for poor work), retired, or released by management. Released is the category which covers a wide variety of possible *economic* reasons for job loss, insufficient production due to lack of raw materials, downturn of demand for product, inability to obtain working capital, preference to hire more skilled workers; as opposed to demographic reasons (retirement, called to military service) or adjustments within the enterprise (sent to training, transferred to other units).

In 1995, nearly 60 per cent of all decrease in employment was attributed to workers voluntarily “resigning.” In 1993 the share of resignations had been even higher, 78 per cent (figure 13). The decline in the share of resignations indicates that management may be taking a more active role in directing employment change: of all job-leavers, the share of workers “released” doubled from 7 to 14 per cent from 1993 to 1995. The share “dismissed” for poor work performance tripled,

from 7 to 21 per cent.⁷

Figure 13. Distribution of job-leavers by reason, 1993 and 1995



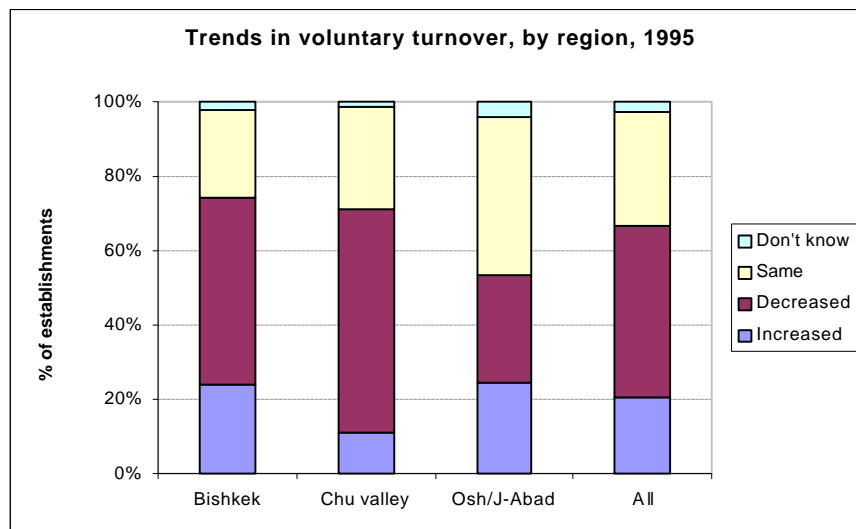
Sources: KSIE I and II.

The majority of establishments indicated that the share of resignations among job-leavers was lower in 1995 than in the previous year (figure 14). In only one out of five establishments had the rate of voluntary quits increased. Establishments in all regions of the country reported the same downward trend in voluntary turnover.

The findings from the two establishment surveys of the Kyrgyz manufacturing sector document the massive transition underway, in terms of property form, gender and age composition of the work force, and size of enterprises. There are also signs that restructuring among manufacturing sectors continues, with rates of job displacement that are still rising. The most discouraging finding is the lack of evidence of replacement job creation in any of the manufacturing sectors or regions of the country.

⁷There were no significant differences across industries or size of establishments in the proportion of released workers among all job-leavers.

Figure 14. Trends in voluntary turnover, by region, 1995



Source: KSIE II.

3. Hidden unemployment

The job loss documented in the manufacturing sector of the Kyrgyz economy represents only a portion of the total change in labour utilization. Many of those counted as employed were placed on leave or on shortened hours involuntarily because their employers had insufficient work relative to the number employed. Several groups of questions on the survey probed employment practices and managers' expectations to gauge whether the job loss represented the bottom of the trough or whether employment was likely to decline further. Four methods of estimating hidden unemployment are presented, followed by an explanation of why practices to retain workers above the level needed to match current demand for output persist, from the perspectives of both managers and workers.

The first method of estimating underutilised labour is to ask directly for *managers' perceptions*: do they consider some of their workers "redundant," i.e. could they produce current output with fewer workers. A second method is to examine *employment terms*. Some workers are counted "on the books" but are on extended leave because there is no work for them to do, or are working part-time because there is insufficient work to engage them full time. Workers on leave and some portion of workers on reduced work day or work week schedules should also be counted as surplus labour. A third method of disguised unemployment is to encourage women to take *exaggerated maternity leaves*. By extending the time they take away from their jobs to be home with young children, employers reduce labour costs but the women maintain formal links with their employers and thus access accompanying privileges. To the extent that maternity leaves are above a "normal" rate, assuming no marked increase in fertility rates, some portion of women placed on maternity leave should be considered as still in the labour force and part of the hidden unemployed within establishments. Finally, workers who remain employed but *without receiving pay* over an extended period of time may also be considered part of the hidden unemployed. These methods allow

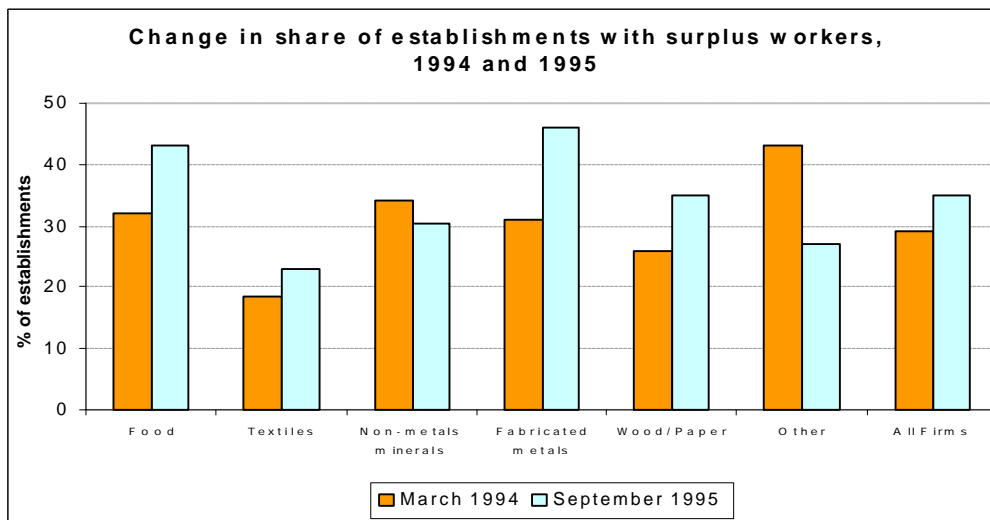
us to estimate the hidden employment, the underutilised labour of persons formally counted as employed.

3.1 Managers' perceptions of labour redundancy

Survey respondents clearly indicated that the job loss has not bottomed out. Despite the jobs already shed, one third of all establishments reported having redundant workers, i.e. that they would be able to produce the same output with fewer workers. Moreover, slightly more establishments reported having redundant workers in September 1995 than in March 1994 (figure 15).

The share of establishments reporting having redundant workers increased substantially in food and fabricated metals establishments, from 30 per cent to over 40 per cent in each case. The change was most marked for the smallest establishments. In 1994, 18 per cent reported having redundant workers; a year and half later 36 per cent said that they would be able to sustain their present production level with fewer workers. (See Appendix table 2 for details by region, size and industry.)

Figure 15. Change in share of establishments with surplus workers, 1994 and 1995



Sources: KSIE I and II

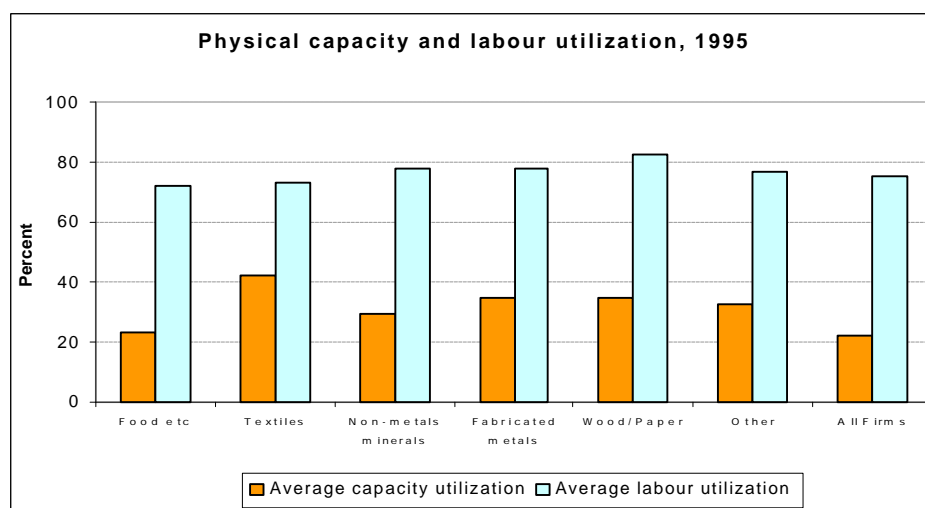
The share of redundant workers among the employed is far from marginal. The average redundancy rate was 24.5 per cent across the 82 (out of 232) establishments that reported being able to maintain production levels with fewer worker. *This adds up to some 7,150 workers, or 8 per cent of the total employment covered in the survey, considered redundant by their employers. This was managers' estimates of their surplus workers after they had cut 20,700 jobs in the first nine months of 1995, through the retrenchments, retirements, and dismissals documented above.*

One way to check the accuracy of managers' estimates of labour redundancy is to compare plant capacity utilization to labour utilization. Overall, managers said that they were using just under 40 per cent of their production capacity. The labour utilization rate can be defined as the inverse of

the redundancy rate (i.e. if a manager estimated that 10 per cent of the work force was redundant, then the labour utilization rate would be 90 per cent.) The corresponding rates, by industry sector, are provided for the 82 establishments which regarded some workers as redundant in figure 16.

In all industries, managers of these establishments reported higher labour utilization than physical capacity utilization. At a minimum this means that managers did not overestimate the share of their workers labelled redundant. At worst, because production capacity exceeds demand, enterprise restructuring can be expected to continue and additional workers will be displaced.

Figure 16. Physical capacity and labour utilization, 1995



Source: KSIE II. Establishments with redundant workers, n=82.

3.2 Reduced work time

Retaining employees who cannot contribute to production, because there is no market for the products they would produce or there is no materials for them to process, represents a drain on the establishments' finances and constrains their ability to become productive or profitable. Establishment directors or managers in the Kyrgyz Republic, as in other CIS countries, have resorted to various ways of reducing the costs of retaining surplus workers. Measuring the prevalence of such practices is the second way of estimating unemployment hidden within establishments.

One increasingly popular response has been to place workers on extended administrative leave with or without pay.⁸ The current survey shows that the practice continues to be pervasive among Kyrgyz manufacturers. *Four out of five establishments had placed some employees on extended leave in 1995; one out of three persons employed in September 1995 had been placed on extended*

⁸ Previous establishment surveys have documented this practice in other CIS countries. See, for example, G. Standing, *Russian Unemployment and Enterprise Restructuring, Reviving Dead Souls*, (London: MacMillan Press, 1996); G. Sziraczki, "Emerging labour market policy in Kazakhstan," *Labour Market Papers* No. 13, ILO, Geneva, 1995; and G. Standing and L. Zsoldos, "Labour market crisis in Ukrainian industry," *Labour Market Papers* No. 12, ILO, Geneva, 1995.

leave for at least part of the previous nine months.

The reliance on extended leaves to “manage” surplus labour has, if anything, increased since the first survey was conducted: The share of establishments placing some workers on leave rose from 69 per cent in 1993 to 80 per cent in 1995. The average share of these firms’ workforce placed on leave increased from 39 per cent in 1993 to 45 per cent in 1995. And the average length of leave grew from eight weeks to nine.

The evidence on leaves demonstrates most clearly the precarious position of workers in the Osh/Jalal-Abad region. In Osh City itself, 94 per cent of establishments had placed workers on leave, and the average length of leave was 11 weeks. In the entire Osh/Jalal-Abad region, 55 per cent of all workers had experienced episodes of being placed on leave in 1995. Much of this can be explained by the decline in the agricultural-based food and textiles industries. One half of textiles workers and one third of food industry workers had been placed on leave by their employers. (See Appendix table 3 for breakout of this data by region, size and industry.)

Estimating the total unemployment hidden under the rubric of extended leave is straight forward. The number of employees placed on leave multiplied by the average length of the leave provides the total number of work weeks lost per establishment. Summing across all establishments gives an estimate of 430,840 total work weeks lost. The total number of weeks from January through the end of September, less two weeks of assumed vacation time, leaves 37 weeks to be considered as full-time work per employee. Dividing the total number of work weeks lost by 37 weeks yields an estimate of the full-time equivalent number of surplus employees represented by administrative leaves. *By this calculation, 11,640 full-time equivalent jobs formally filled actually represented surplus labour, or 13 per cent of the total work force employed by the surveyed establishments in 1995.*

An alternative employment practice to reduce the burden of surplus workers is to reduce the hours worked per week.⁹ Just over one fourth of the establishments put some workers on reduced work schedules in 1995. The average shortened work schedule was 12 hours less per week -- or the loss, on average, of one fourth of the typical work week. Far fewer establishments reported reducing work schedules than having placed workers on leave (28 per cent versus 80 per cent), and one out of four employees had seen their work hours reduced at some point over the year, versus one out of three being put on extended leave. But the average duration of the reduced work schedule was far longer than the duration of extended leave, 21 weeks compared to 9 weeks respectively. (Data also presented in Appendix table 3.)

Larger establishments were more likely to reduce working hours than smaller ones. Forty per cent of workers in establishments with over 1000 employees had seen their hours reduced in 1995, compared to 17 per cent in medium-sized establishments. The phenomenon was prevalent only in the capital, Bishkek, where fully half of all workers had seen their hours reduced, versus 6 to 13 per cent in less urban areas.

The prevalence of putting workers on part-time schedules seems to be constant over the past few years. In 1993, 23 per cent of all firms had put some workers on reduced schedules. By 1995,

⁹The survey questionnaire asked whether “the establishment placed any workers on reduced work schedules.” Thus these figures should accurately represent employees working less than full time at the request of management, not as a result of workers’ preferences.

the share had moved up slightly to 28 per cent. The average share of these firms' workforce placed on part-time schedules stayed the same, at about 64 per cent in both years. The duration of the part-time schedules increased only marginally, from 19 weeks in 1993 to 21 weeks in 1995, and the average number of hours reduced per week increased from 8 to 12.

A similar formula can be used to estimate the total unemployment hidden in reduced work schedules as was used above for the unemployment hidden by placing workers on extended leave.¹⁰ *The full-time equivalent number of jobs represented by reduced work schedules, which is actually underutilised labour but not counted as unemployment, is 4,640, or 5 per cent of total employment in the surveyed establishments in 1995.*

Both of these employment practices represent ways of spreading insufficient work across the existing work force. From the employees' perspective, as long as there is a chance of being called back to remunerated work, there is an incentive to remain formally attached to their employers. Their willingness to do so, however, is related to the difficulty of finding full-time full-year work elsewhere and the prospects of continuing to receive some social benefits. The most important of these may be that on-leave and part-time work continues to count for meeting the time-employed eligibility requirements in pension plans.

From the employers' perspective, extended leaves and shortened work weeks are strategies for reducing wage claims when there is insufficient sales and income to meet current payroll. While at the same time managers maintain the option to recall experienced, known workers should output demand increase, thus avoiding having to recruit and train new workers. Knowing that the chances of re-employment, at better jobs, are low for their workers, they take little risk by placing workers on leave. More importantly, however, laying off workers may obligate employers to pay severance fees and give advance notification. Informally reducing working time, through leaves or reduced hours, spares these expenses but at the same time brings labour costs more in line with productivity and output.

There is some evidence that reducing work time does not substitute, but complements, direct employment cuts: Establishments which had reduced work schedules tended to have a larger decline in employment, 16 per cent cuts versus 11 per cent.¹¹ Also, the two practices seem to overlap: 95 per cent of the enterprises which had reduced work schedules also had placed some workers on extended leave.

However, placing workers on reduced schedules did not seem to speed voluntary exits by workers: On average, quit rates (share of resignations among job-leavers) were lower in establishments which had placed workers on leave or which had higher shares of workers on part-time

¹⁰The average number of hours lost per week multiplied by the average duration of the part time schedule, per affected employee, provides the total number of work weeks lost per establishment. Summing across all establishments gives an estimate of 171,629 total work weeks lost. Dividing the total number of work week equivalents lost by the 37 weeks representing full time work/employee yields an estimate of the full-time equivalent jobs of surplus labour hidden in reduced work schedules.

¹¹ Difference between the two means (average employment change) is significant at the .05 level. There was no significant difference in employment change between establishments which had placed workers on extended leave and those which had not.

schedules.¹² Workers' acceptance of reduced hours and earnings, in preference to quitting, indicates that the benefits of not quitting outweigh the costs. Given the survey findings on manufacturing job loss, it is reasonable that workers would weigh their prospects of re-employment elsewhere as quite low. This is also an indication that displaced industry workers do not expect to find replacement jobs in the service sector.

3.3 Maternity leave

In September 1995, some 14,600 women were officially on maternity or child care leave from the establishments surveyed.¹³ In the entire survey, the maternity rate was 31 per cent, calculated as the number of women on maternity leave as a percentage of the total number of women employed. *In other words, for every three women employed, one was listed as on maternity leave.* Rather than represent a rising fertility rate, the findings seem to indicate that establishments are "encouraging" women employees to prolong child care leave, on an unpaid basis, as a method of managing surplus labour.

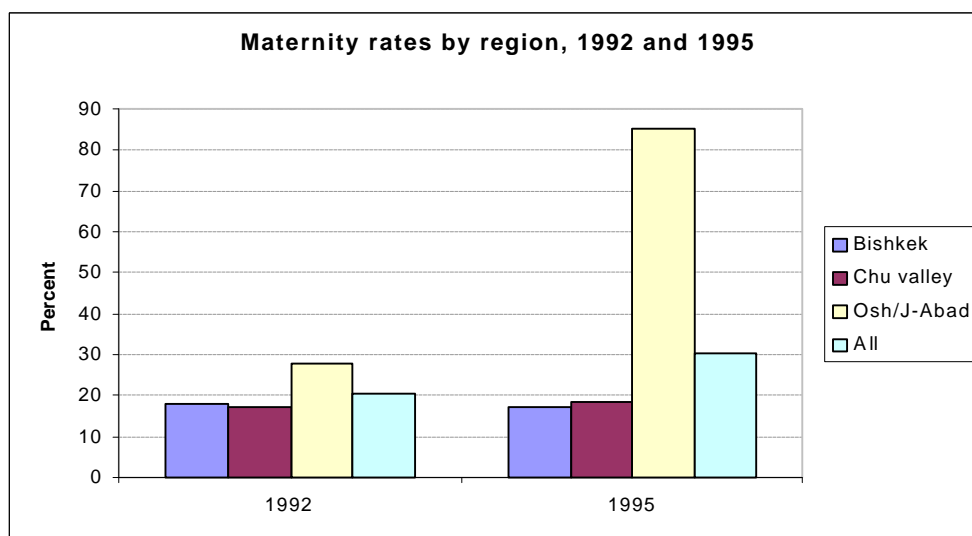
Further evidence that economic reasons, not fertility, accounted for extended use of maternity leaves is the fact that maternity leaves were highest in female-dominated industries and establishments. Figure 17 compares maternity rates across regions. The rate is highest in the southern region of Osh/Jalal-Abad: 85 per cent. This means that for every five women employed in establishments surveyed in that region, four women were officially on maternity leave. As was discussed above, 44 per cent of employment in the Osh/Jalal-Abad region is in the textile industry which has the highest proportion of female workers, 67 per cent, compared to 53 per cent across all industries. Average maternity rates were the highest in the two industries with the highest proportions of women workers, textiles (57 per cent) and food (39 per cent).¹⁴

¹²The share of resignations among job-leavers was 67 per cent on average in establishments which had reduced work hours and 74 per cent in those which had not (mean differences significant at just over the 10 per cent threshold.) The correlation between per cent resignations and per cent of workers placed on part-time schedules was negative and significant at the 1 per cent level. The correlation was also negative for per cent of workers placed on extended leave at the 5 per cent significance level meaning that employers view these as alternative rather than complementary practices.

¹³ On the survey questionnaire, women on maternity leave were not counted among the total number employed in each establishment.

¹⁴ Across all establishments, regardless of industry, the correlation coefficient between women's share of employment and maternity rate is +.14, significant at the 5 per cent level.

Figure 17. Maternity rates by region, 1992 and 1995*

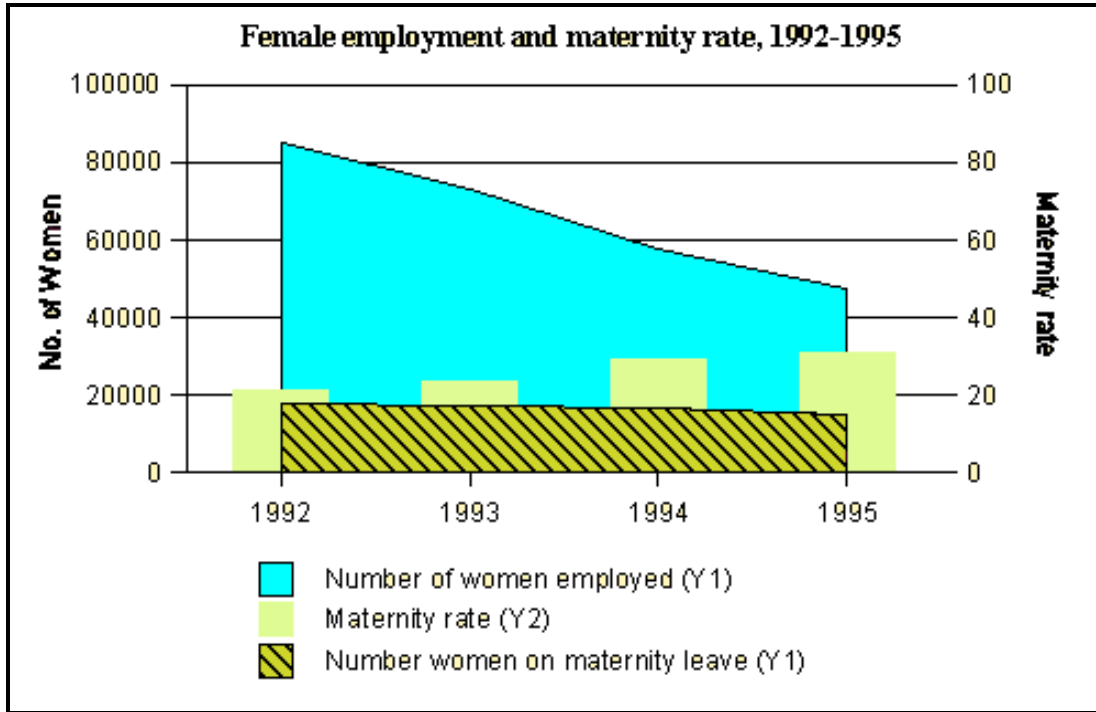


Sources: KSIE I and II

*Number of women on maternity leave as percentage of total number of women employees.

The evidence is strong, then, that a substantial share of the women on maternity and child care leave should be counted among the excess labour supply. Similar to extended administrative leave and reduced work time, prolonging maternity leaves is a method of managing surplus labour, and may be the method of choice in establishments with greater numbers of female workers. Estimating the extent of unemployment hidden in maternity leaves is a more difficult exercise. In 1992, the first year for which survey data was collected, the maternity rate was at an already inflated 23 per cent, and cannot be taken as a baseline of fertility and maternity rates. As shown in figure 19, although maternity leaves have declined slightly in absolute terms, relative to total employment of women they have risen steadily. At 31 per cent, the 1995 maternity rate is 8 percentage points above the 1992 rate, which can be interpreted as the increase over three years in the surplus labour hidden through extended maternity leaves.

Figure 18. Female employment and maternity rates, 1992-1995



3.4 Wage Arrears

Finally, retaining workers on the books but failing to pay them is also an indicator of hidden unemployment, and employees' willingness to continue working without being paid is an indication of their perception of the low likelihood of finding paid work elsewhere. *In 1995, 70 per cent of the establishments reported that they had been unable to pay wages during some period of that year.* The incidence of wage arrears was highest in the fabricated metals industry (90 per cent) and food industry (54 per cent). On average, the duration of wage arrears was eight and a half weeks and affected 43 per cent of the establishments' employees. (See Appendix table 4.)

Respondents explained wage arrears as the result of inability to bring in cash. Ninety per cent reported that wage arrears were due either to inability to sell their products or inability of customers to pay for them. Lack of raw materials and not being able to withdraw deposits from banks were given as reasons by fewer than one tenth of the respondents reporting wage arrears.

Two-thirds of all establishments had offered some workers non-monetary benefits to supplement the regular wage, including 80 per cent of the establishments reporting wage arrears. Examples of such in-kind payments included food, consumer goods, and factory products. On average, non-monetary payments were equivalent to 33 per cent of workers' total compensation, and 66 per cent of the establishments paying non-monetary benefits reported that this share had increased since 1993.

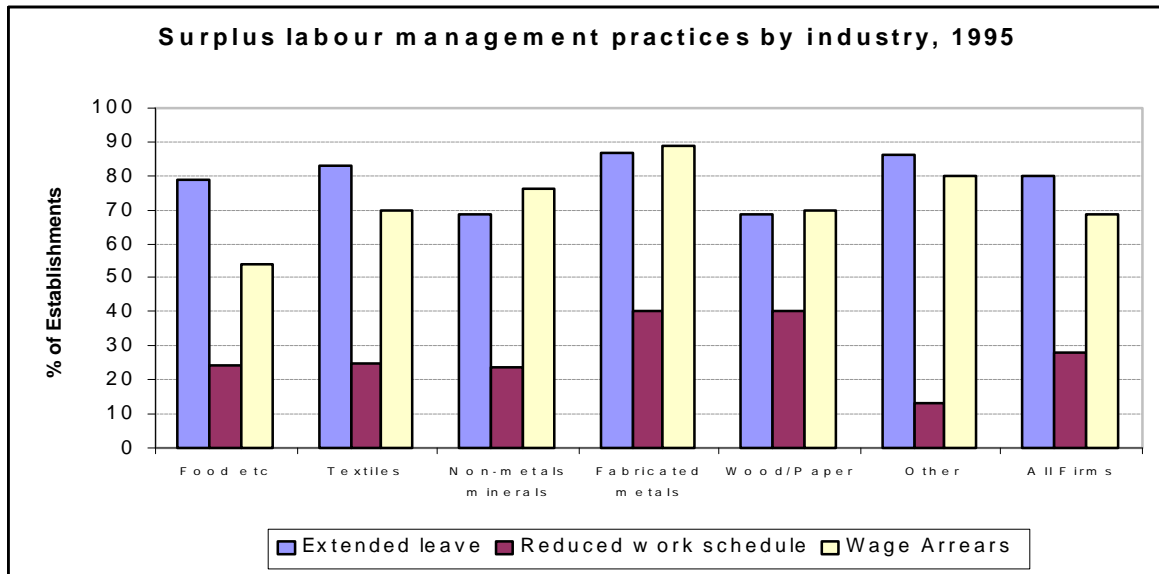
Most establishments which had instituted extended leaves and reduced work schedules to manage the problem of surplus workers also admitted to having periods of not being able to pay their workers. Seventy-five per cent of the establishments placing workers on leave and 90 per cent of the establishments placing workers on part-time schedules had experienced some period of wage arrears in 1995.

3.5 Summary

The survey findings indicate that employment in the manufacturing sector dropped by 20 per cent from 1994 to 1995 and that the employment position of many of those still employed was precarious. Their employers had too little work to employ them full-time, year-round, with pay. *Some 37 per cent of employees had been placed on long-term leave, 29 per cent had been placed on short work schedule, and about 40 per cent had back pay due them in 1995.* In addition, the number of women on maternity leave was equal to one third the number of women currently employed, and it can be assumed that most did not have a remunerative job to return to. The unemployment hidden by such employment practices, in full-time equivalencies, ranges from 5 per cent due to part-time schedules to 13 per cent due to extended leaves. Because workers could fall into one or more of these categories (months of reduced hours, other months of unpaid leave, episodes of wage arrears) these estimates cannot be summed. The most conservative estimate of hidden unemployment is the 8 per cent of workers considered redundant by their employers, plus at least 2 per cent on extended maternity leave.

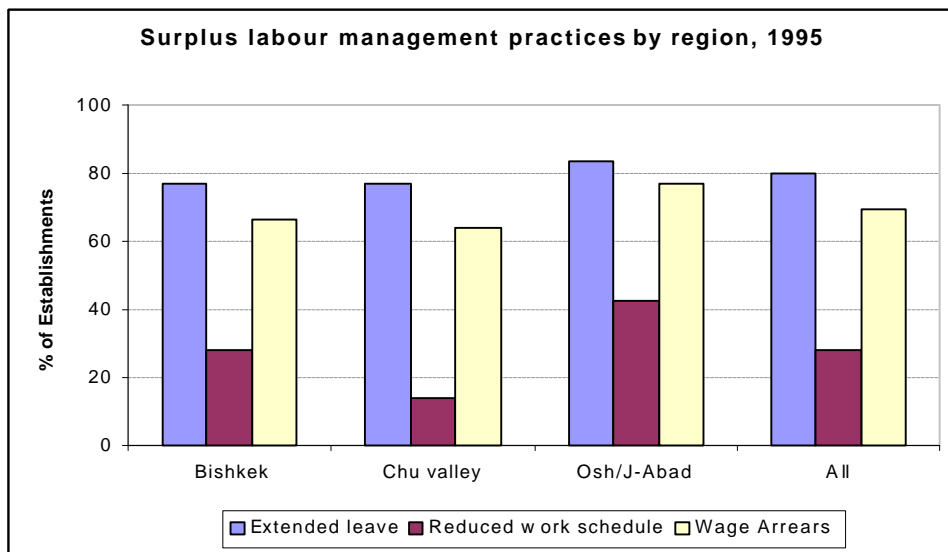
The pervasiveness of these practices is evident in figures 19 through 21. With few exceptions, the share of establishments placing workers on leave and having wage arrears is very similar in most industries, regions and size classes. Reducing working time of employees is the least popular response mechanism. Most striking is the similarity of management responses across different sizes of establishments. The problem of surplus workers and tendency to retain work force size beyond that needed to meet output demand is not limited to the largest state enterprises, where the practice of hoarding labour as a means of sustaining access to state resources was well known under the command economy.

Figure 19. Surplus labour management practices by industry, 1995



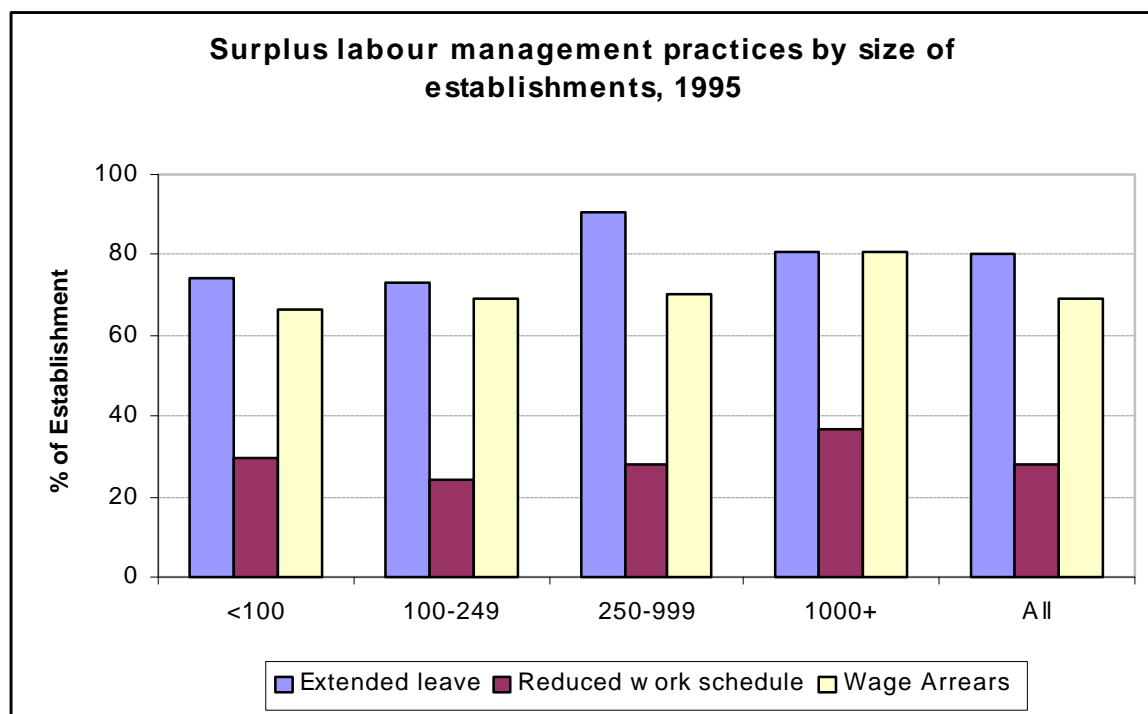
Source: KSIE II.

Figure 20. Surplus labour management practices by region, 1995



Source: KSIE II.

Figure 21. Surplus labour management practices by size of establishment, 1995



Source: KSIE II.

It is possible that managers retain “surplus” workers because they expect demand to turn around and they prefer to avoid hiring and retraining new workers. However, managers’ expectations for additional job cuts in the near future verifies the interpretation that extended leaves, reduced work time, and wage arrears are methods of managing surplus labour. Managers of only 17 establishments, or 7 per cent of those surveyed, expected to increase employment in the nine months following September, 1995. The marginally good news is that a larger segment of the rest expected that employment levels would not change (44 per cent) rather than fall (30 per cent).

Across the 17 respondents expecting to increase employment, the average increase was 30 per cent. Among those expecting employment to decrease, 69 respondents, the average anticipated decline was 21 per cent. Applying the percentage change expected to each establishment’s employment levels gives an estimate of a net decrease of employment of 6,620, equivalent to 8 per cent of the 1995 employment total. This expected employment cut is nearly identical to the total number of workers considered redundant by their employers.

4. Enterprise performance in the State and Private sectors

In 1992 the Kyrgyz Republic initiated a highly-touted plan to decrease state ownership of manufacturing and service units.¹⁵ The principal strategy was to provide vouchers to individuals, with which they could buy “shares” of state-held establishments. This strategy was similar to those used in some other CIS countries in that it tried first to provide the means for individuals to “purchase” shares, by freely distributing vouchers. The first stage of privatization, 1992 through 1994 was almost entirely limited to closed joint-stock purchases, whereby vouchers were distributed to plants’ managers and workers and could not be transferred to outsiders nor exchanged for shares of other facilities. Ownership of small retail and service sector establishments was quickly transferred through this plan, but implementation for larger and manufacturing facilities stalled. The second stage, initiated in 1994 was a more sophisticated plan, in which shares were allocated to citizens on the basis of their previous work contribution and which could be exchanged for shares of any establishments being privatized in open auctions. The salient characteristics of the process are summarized in Appendix table 5.

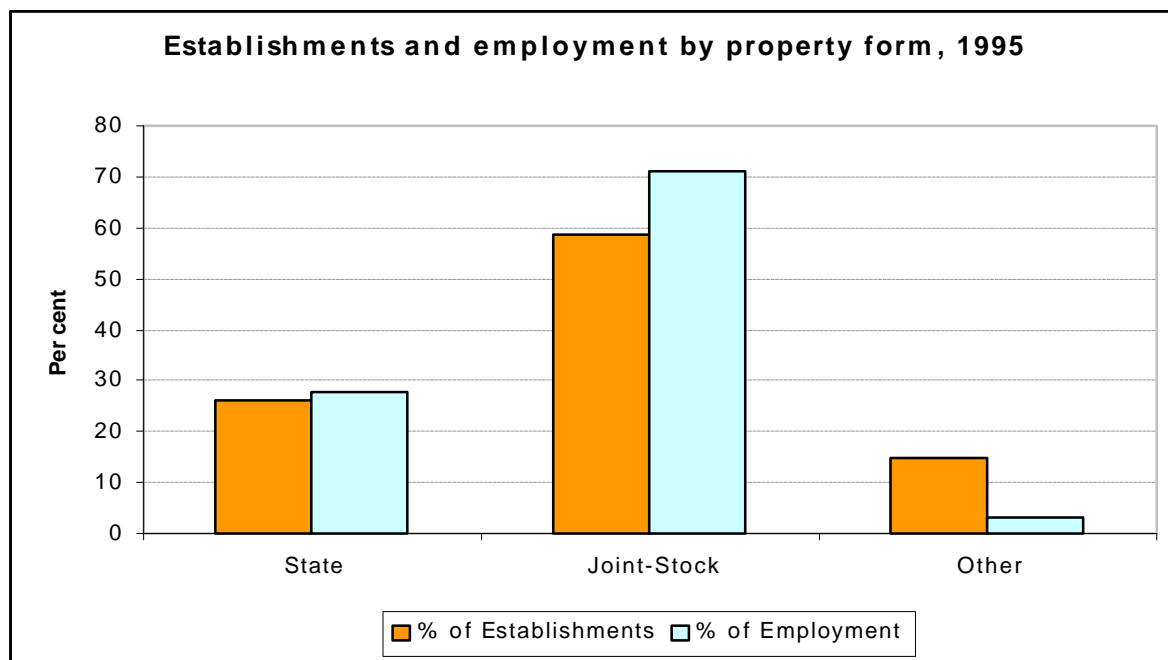
The surveys provide a unique data base with which to assess the initial results of this change in property form. The survey collected data on when establishments changed property form; how ownership shares were distributed among managers, workers, and outsiders; and whether these changes were accompanied by a change in management. The central question is whether change of property form has been associated with better performance at the enterprise level, measured in terms of sales; new market entrance; and employment growth, terms and training.

4.1 Changes in property form and management

As described in Section 1 above, by September 1995, three fourths of the surveyed establishments had changed property form and were no longer state-owned. This represents almost a 25 per cent increase in the number of privatized establishments among those surveyed in December 1993. Closed joint-stock companies accounted for 71 per cent of total employment covered in the survey. The remaining non-state owned establishments (individual owners, cooperatives, lease holdings) accounted for just 3 per cent of employment (figure 22).

¹⁵For detailed descriptions of privatization plans and implementation see Jermakowicz and Pankow, “Privatization in the Kyrgyz Republic,” *Russian and East European Finance and Trade*, November-December 1995; Max Spoor, “Upheaval along the silk route, the dynamics of economic transition in Central Asia,” Institute of Social Studies, Working paper Series No. 216, April 1996; Cheryl W. Gray, “In search of owners, Lessons of experience with privatization and corporate governance in transition economies,” background paper for *World Development Report 1996*, Policy Research Working Paper, The World Bank, April 1996.

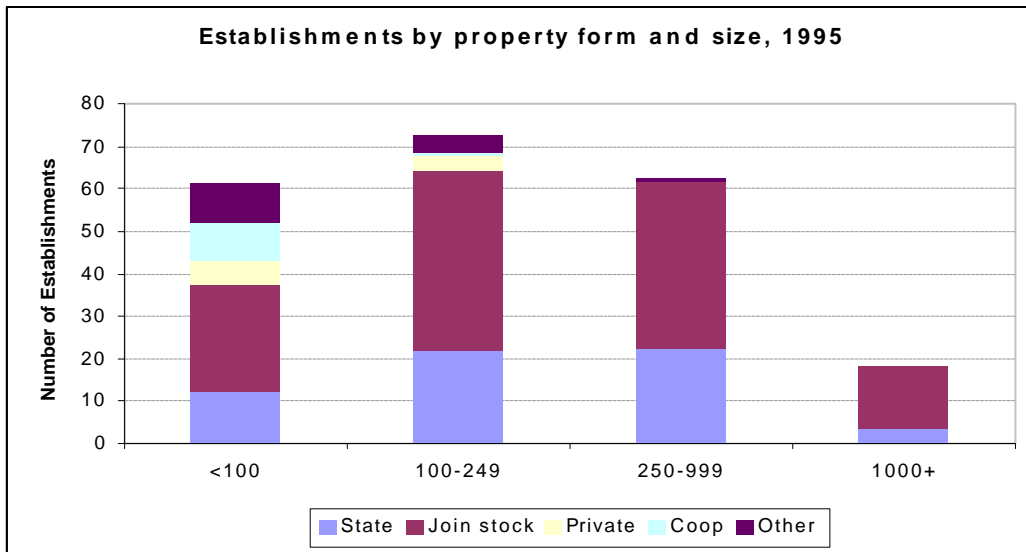
Figure 22. Establishments and employment by property form, 1995



Source: KSIE II.

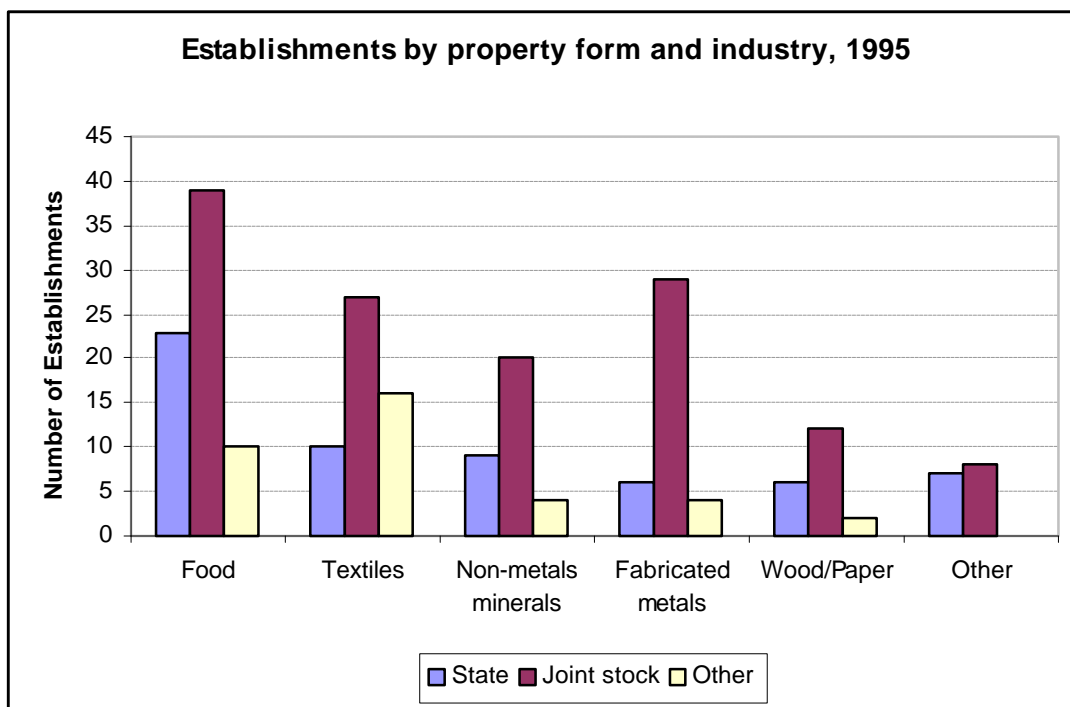
The change of property form was fairly consistent across size classes (figure 23). The alternative property forms, such as cooperatives, lease holdings, or private individual ownership, tend to be small establishments. The change in property form has not been limited to selected industries (figure 24), although as noted earlier, privatization of the small retail and trade sectors began earlier and is more complete than the process in the manufacturing sector. Although not predominate in any of the manufacturing sectors, state ownership is proportionally largest in the food industry and smallest in the fabricated metals industry.

Figure 23. Establishments by property form and size, 1995



Source: KSIE II.

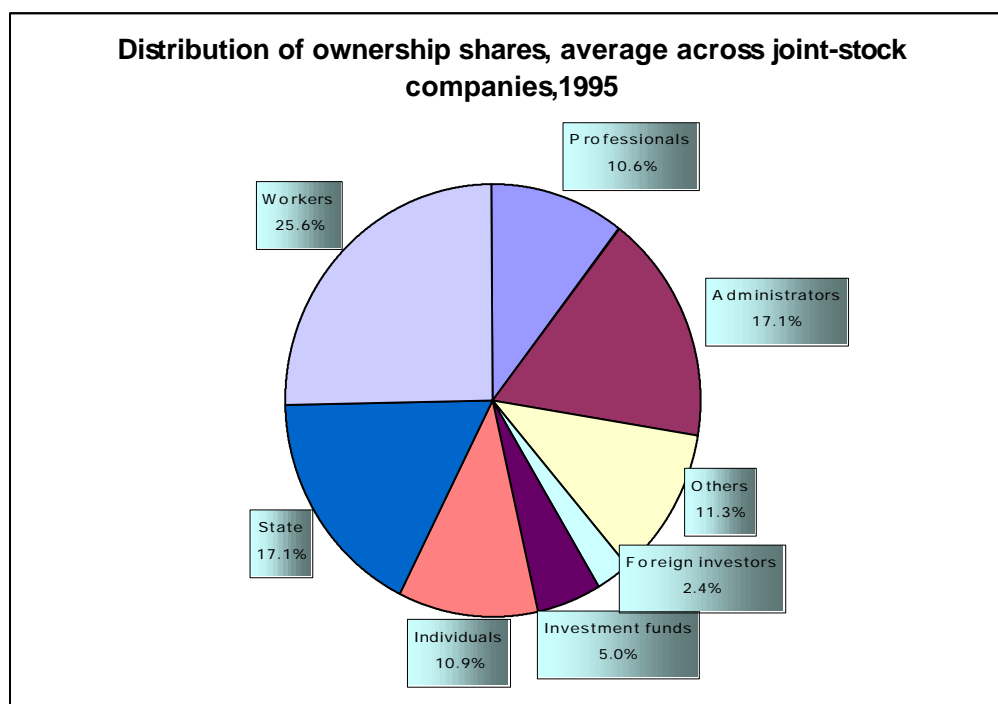
Figure 24. Establishments by property form and industry, 1995



Source: KSIE II.

On average, production workers owned a quarter of the shares in the joint-stock companies (figure 25). Combined with shares held by managers and professionals, employees of joint-stock companies on average controlled just over 50 per cent of the shares of the establishments in which they worked. The role of investment funds and foreign investors in the Kyrgyz privatization is also shown to be quite limited.

Figure 25. Distribution of ownership shares, average across joint-stock companies, 1995

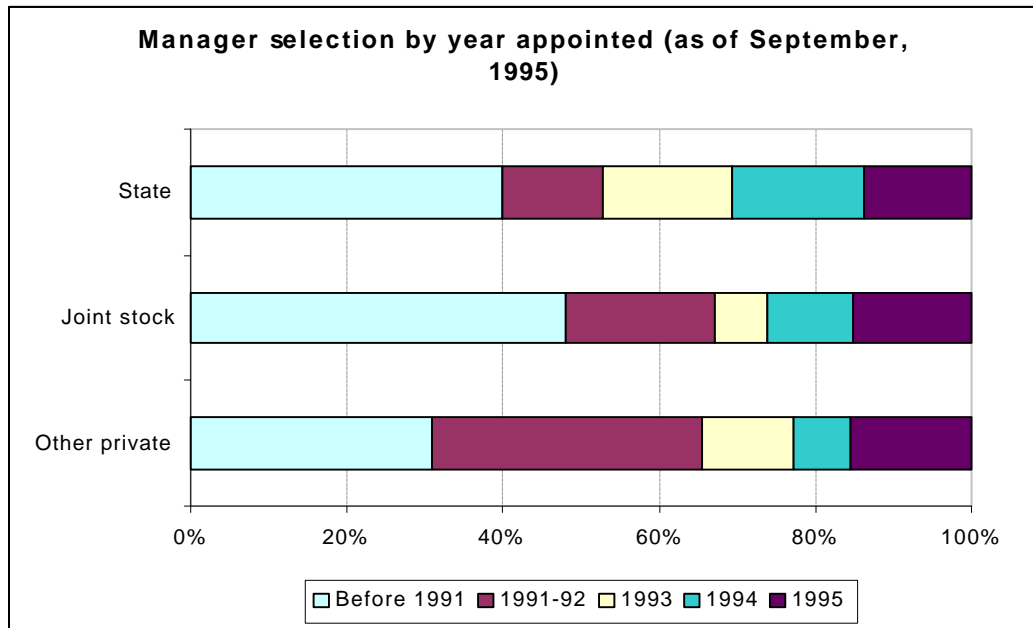


Source: KSIE II.

Change of top managers, and the way in which they are selected, has proceeded at a much slower pace than has change of property form. This is not surprising given that the closed joint-stock property form was preferred in at least the beginning stages of the privatization process. However, relatively few joint-stock companies have elected new managers, once given the opportunity to do so, and the majority of managers currently in senior positions have been appointed by state agencies.

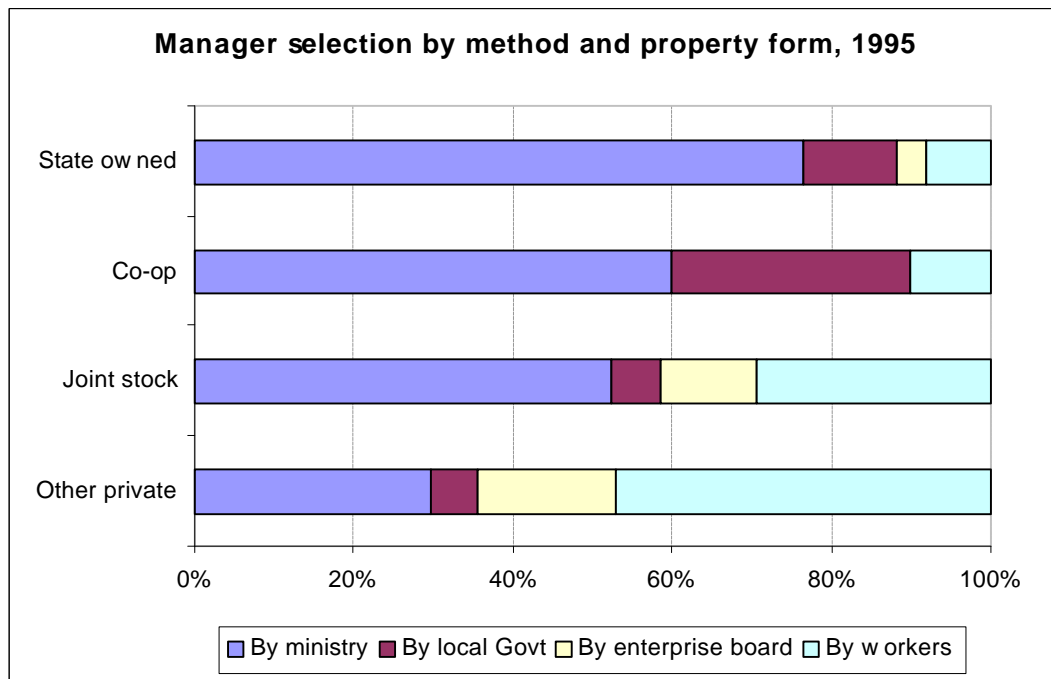
There has been greater turnover of managers in state-owned establishments than in joint-stock companies: Senior managers in 47 per cent of the state-owned establishments had been appointed since 1993, compared to in 33 per cent of the joint-stock companies (figure 26). Furthermore, fully half of the joint-stock companies were managed by government appointees (figure 27). Managers at all of the cooperatives were government appointees, although a third had been appointed by local, rather than federal, government agencies. Workers had elected senior management in 29 per cent of the joint-stock companies, compared to about 10 per cent of the state-owned or cooperative establishments.

Figure 26. Manager selection by year appointed (as of September, 1995)



Sources: KSIE II.

Figure 27. Manager selection by method and property form, 1995



Sources: KSIE II.

The field research in 1996 provided some anecdotes that workers took their right and responsibility to select senior managers quite seriously. However, technical-level staff interviewed at several plants said that they had exercised a good deal of influence in the management of their plants under state-ownership, and that it was more the form of influence that had changed (voting shares, for example) than the substance.

4.2 Sales and markets

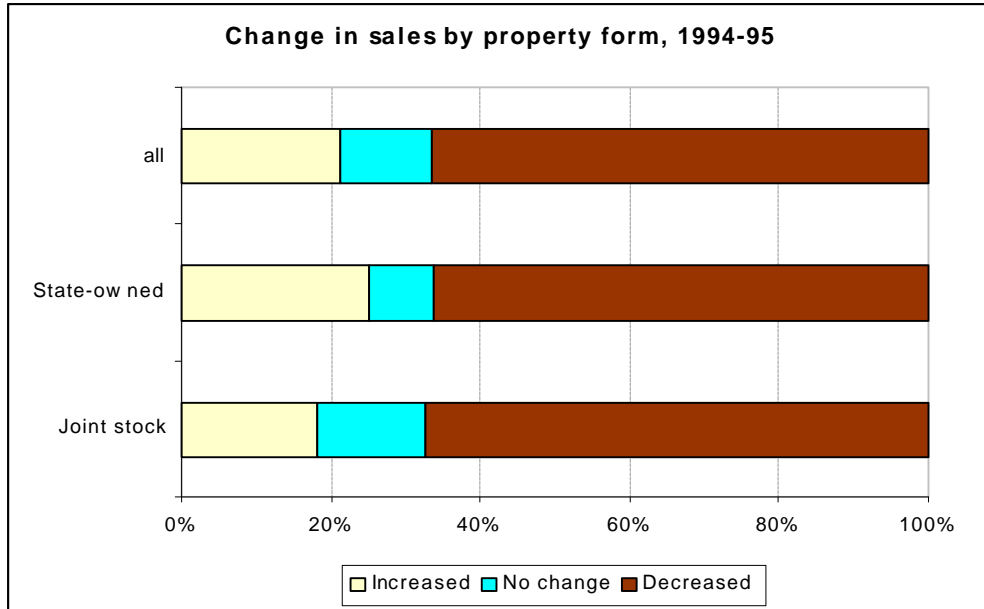
The survey findings reveal few differences in production, sales, and market performance registered thus far between joint-stock and state-owned establishments. The evidence seems to indicate that the change in property form alone, accompanied by modest managerial changes, has not improved the ability of establishments to respond effectively to the serious economy-wide problems. This section compares survey findings on sales, barter, and exports between state-owned and joint stock companies. The following section examines employment performance.

4.2.1 Decline in sales

Two thirds of the establishments reported that their sales (in real, inflation-adjusted value) had fallen over the previous year and another 13 per cent reported that sales had not changed (figure 28). The proportions of joint-stock and state-owned establishments reporting declining sales are identical. For the few establishments that increased sales (15 state-owned and 25 joint-stock companies) the average growth was high, with a third of each group reporting sales increase of over 50 per cent.¹⁶

¹⁶There was no statistically significant difference between the average percentage increase of sales among those state-owned and joint-stock companies reporting sales growth, nor average rate of decline between those reporting a drop in sales.

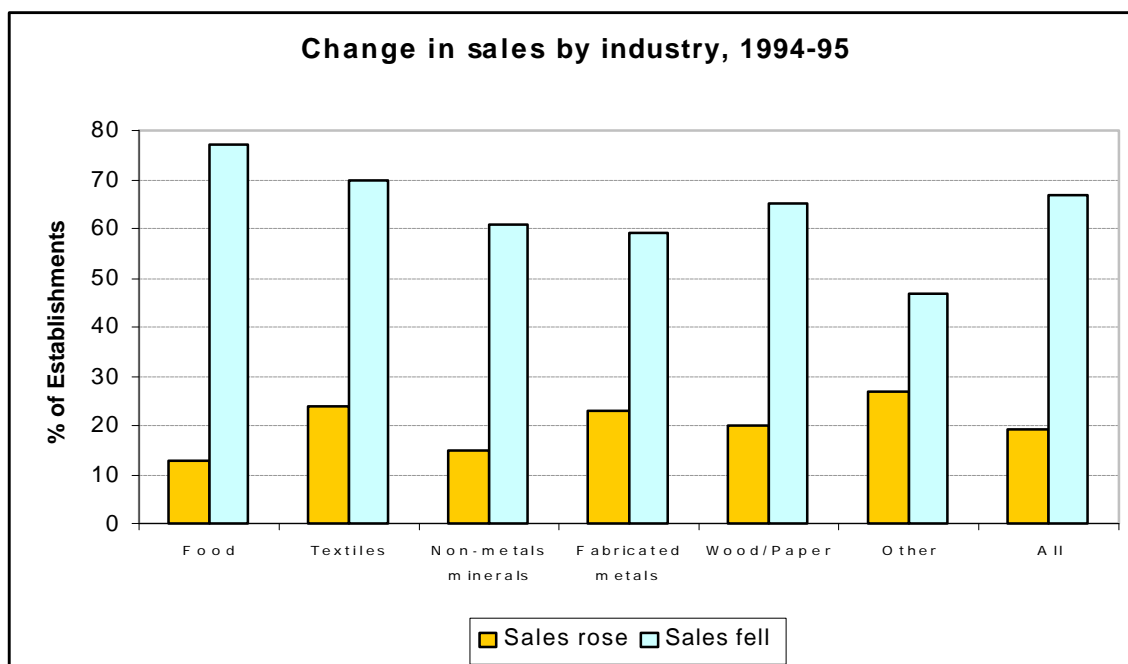
Figure 28. Change in sales by property form, 1994-95



Sources: KSIE II.

The absence of a turn-around in Kyrgyz manufacturing is also evident in an industry-by-industry comparison (figure 29). Fabricated metals had the best performance, with one fifth of establishments reporting a rise in sales. *Some 75 per cent of the establishments in the food industry reported that sales had fallen--a disturbing indication of continuing decline in the standard of living.* Southern Kyrgyzstan had the lowest portion of establishments reporting sales increase, and in the less urban Osh Oblast, fewer than one out of ten establishments reported sales growth.

Figure 29. Change in sales by industry, 1994-95

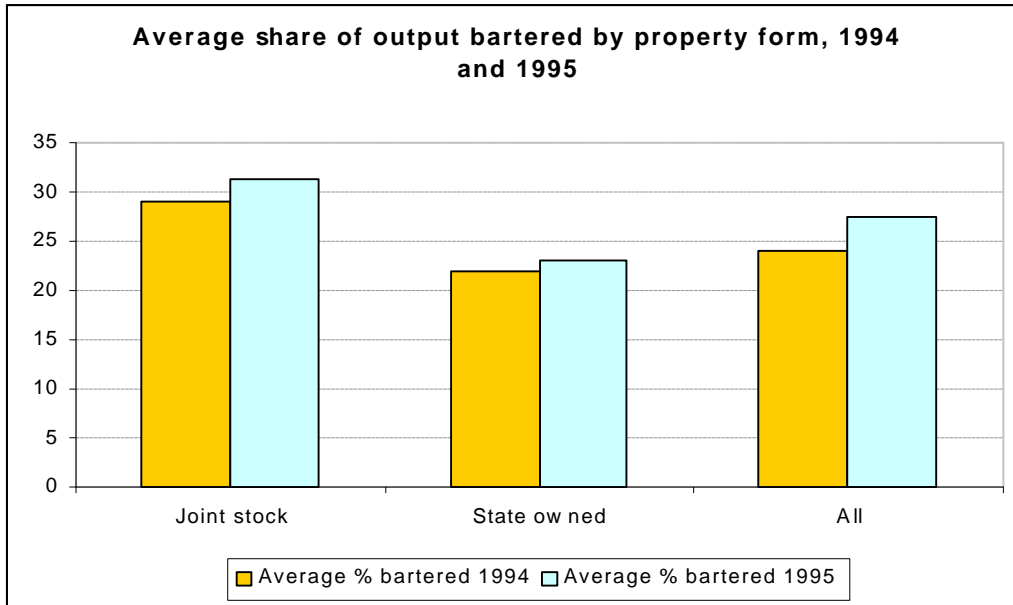


4.2.2 Barter trade

Many businesses reported resorting to exchanging their output for material inputs, for labour, or for consumer goods with which to “pay” workers. This practice became more prevalent among Kyrgyz manufacturers in the interval between the two surveys. In 1993, establishments bartered 19 per cent of their output on average. By 1995 the average share had risen to 28 per cent, and 70 per cent of all establishments reported bartering some portion of their output (See Appendix table 6 for details by industry, region and size.)

Bartering seems to be less of an option for state-owned establishments. In 1995 the average share of output bartered by state-owned establishments was 23 per cent, and had hardly changed over the previous year (figure 30). The average share of output bartered among joint-stock companies was over 30 per cent, and had risen two and a half percentage points over the average in 1994.¹⁷ Two-thirds of all joint-stock companies transferred more than 10 per cent of their output under barter arrangements, while just under half of the state-owned establishments did so.

¹⁷The difference in average share of output bartered between state-owned and joint-stock companies was significant at the 10 per cent level.

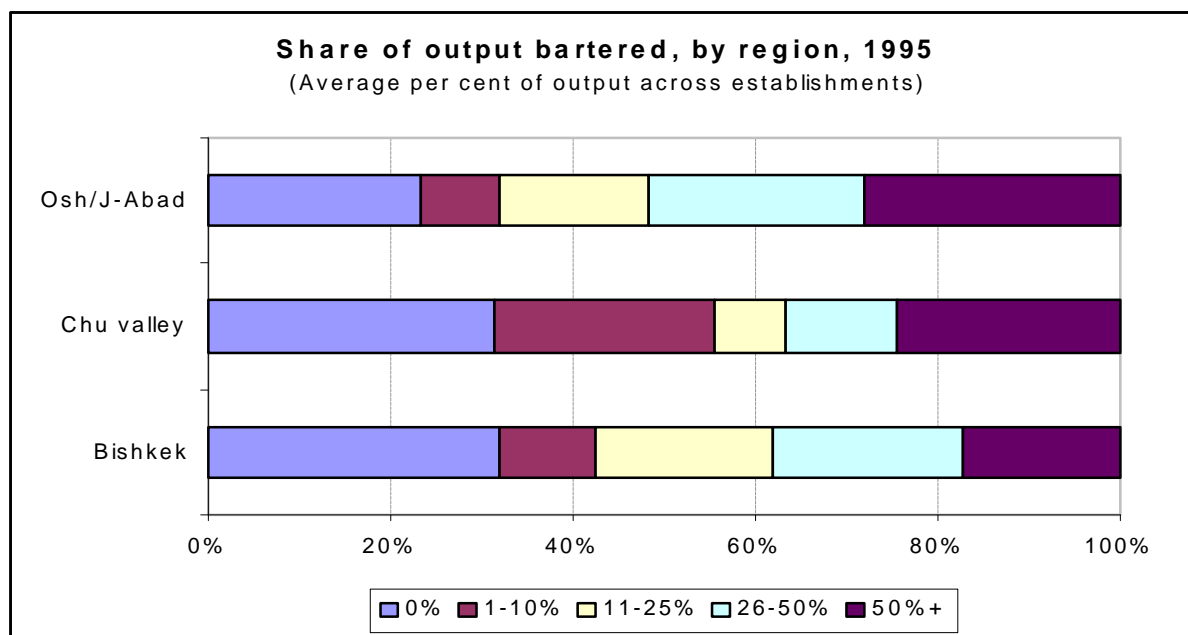
Figure 30. Average share of output bartered by property form, 1994 and 1995

Sources: KSIE I and II.

Whether bartering indicates that an establishment is more or is less successful is ambiguous. On the one hand, those that barter obviously do so as a last resort, being unable to exchange their goods for cash due to the overall depression of demand, poor product quality, or lack of liquidity in the country. On the other hand, it may be a survival strategy of establishments with long-term viability trying to deal with these short-run crises and to provide what income they can to a work force otherwise perhaps left destitute. Establishments in Bishkek tended to resort to bartering less frequently than did establishments in Osh Oblast, where the general economy has been slower to revive; 17 per cent of establishments in Bishkek versus 28 per cent of establishments in Osh Oblast bartered at least half their output in 1995 (figure 31).

Figure 31. Share of output bartered, by region, 1995

(Average per cent of output bartered across establishments)



4.2.3 Exports and imports

The ability to export products is usually a mark of a successful business, indicating competitive product quality, prices, and delivery reliability. The definition of export changed for Kyrgyz manufacturers when the country became an independent republic; products formerly traded within the huge internal market of the Soviet Union have become foreign exports. Retaining markets within the new Commonwealth of Independent States was an achievement that very few Kyrgyz manufacturers could claim in 1995; even fewer had succeeded in maintaining or entering new markets beyond the CIS. The disruption in both supply chains, for raw materials and other inputs, and in marketing channels was the single greatest challenge identified by business managers (see section 6.1 below). The challenge is particularly severe for Kyrgyzstan as a landlocked country with a production base never organized for national self-sufficiency.

On average, Kyrgyz manufacturers exported 12 per cent of their output to other CIS countries in 1995, and only 1 per cent to non-CIS countries (figure 32). The state-owned establishments on average exported nothing beyond CIS countries, compared to a 1.7 per cent average by joint-stock companies. The average share of output exported did not differ materially across regions, but increased proportionally with establishment size (See Appendix table 7).

In all industrial sectors except food, establishments reported a higher average share of inputs imported than output exported (figure 33). Establishments in the fabricated metals industry had the highest average share of exports. The food industry had one of the lowest average shares of output exported but was the only sector with a higher share of output exported than of materials imported. The gap between exports and imports was largest in the wood and paper sector. The Osh Oblast

appears to be the least dependent on inputs from other regions, with average shares of inputs imported half as high as in the other regions.

Figure 32. Output destination, establishment averages by property form, 1995

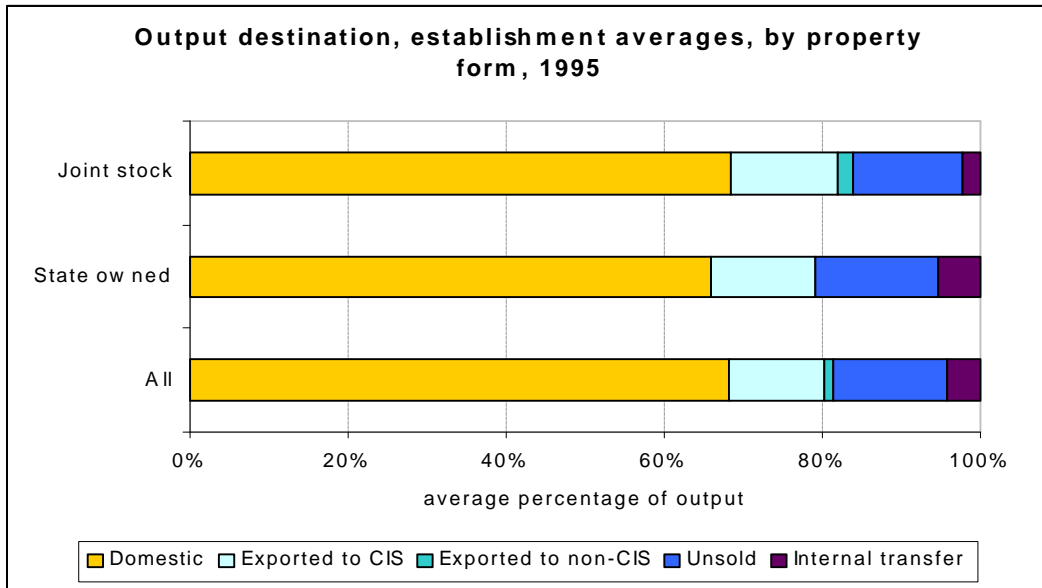
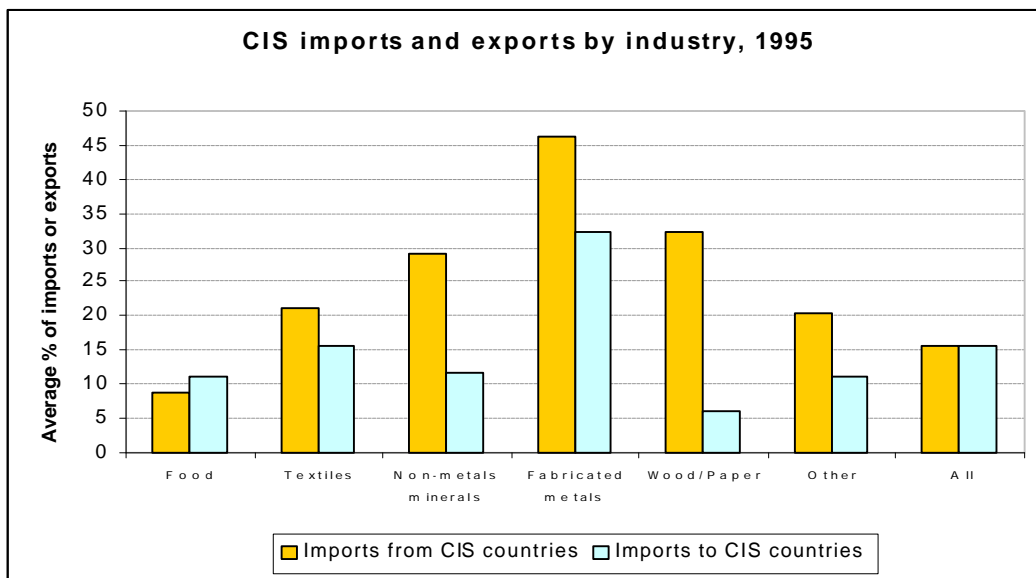


Figure 33. CIS imports and exports by industry, 1995



Source: KSIE II.

4.3 Employment and surplus labour

One of the tenets of the method of transition to a market economy followed by Kyrgyzstan was that privatization, removing production from state control, was a necessary first step expressly because managers in establishments would respond to the profit motive by moving quickly to rationalize production, including discharging redundant workers. Rather than see their “responsibility” in terms of providing employment, social services, and meeting centrally-set output targets, they would begin to try to minimize costs. This would launch a virtuous cycle of increasing productivity and profitability which would lead to job growth, both within the firm and elsewhere as it increased demand for inputs and as its paid workers increased consumption and savings. Eventually viable jobs would be created for the displaced workers. As presented above, although the job cutting part of the process has been severe in the manufacturing sector, there is no evidence of new job creation. *Contrary to expectations the survey documents no significant difference in the behaviour of state-owned and joint-stock companies in terms of average change in employment or average share of work force considered redundant.*

4.3.1 Employment trends

The most recent data provided by the second survey of Kyrgyz manufacturers shows that state-owned establishments did shed a larger percentage of their jobs in the first nine months of 1995 than did joint-stock companies. Total employment in the state-owned establishments fell by 18.4 per cent, compared to 13.5 per cent in the joint-stock companies (table 2). However, as shown in figure 22 above, state-owned establishments accounted for a much smaller share of employment than the joint-stock companies and thus a smaller nominal change in their employment represents a larger change in proportional terms, relative to the joint-stock establishments. The average drop in employment among the joint-stock establishments was just one percentage point higher than the average change among state-owned establishments, 12.9 per cent compared to 11.8 per cent.¹⁸

Table 2. Employment change by property form, December 1994-September 1995

	Total employment change	Average employment change per establishment
All establishments	-14.8%	-12.5%
Joint-stock companies	- 13.5%	-12.9%
State-owned	- 18.4%	-11.8%

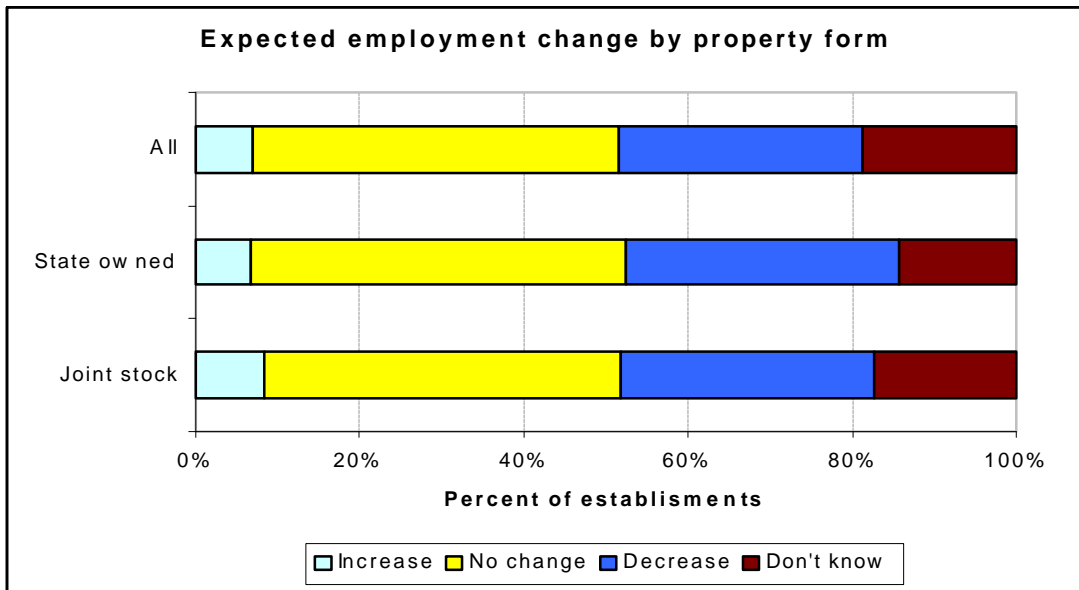
Source: KSIE II

Managers’ expectations for the near-term prospects of their work force likewise did not vary substantially between joint-stock and state-owned establishments. About 9 per cent of the joint-stock

¹⁸The difference between the mean percentage change of employment between joint-stock and state-owned establishments was not significant (t-statistic = .36).

establishments expected to increase employment in the upcoming year, compared to 6.6 per cent of the state-owned establishments. A third of the managers in each group expected employment to decrease further (figure 34).

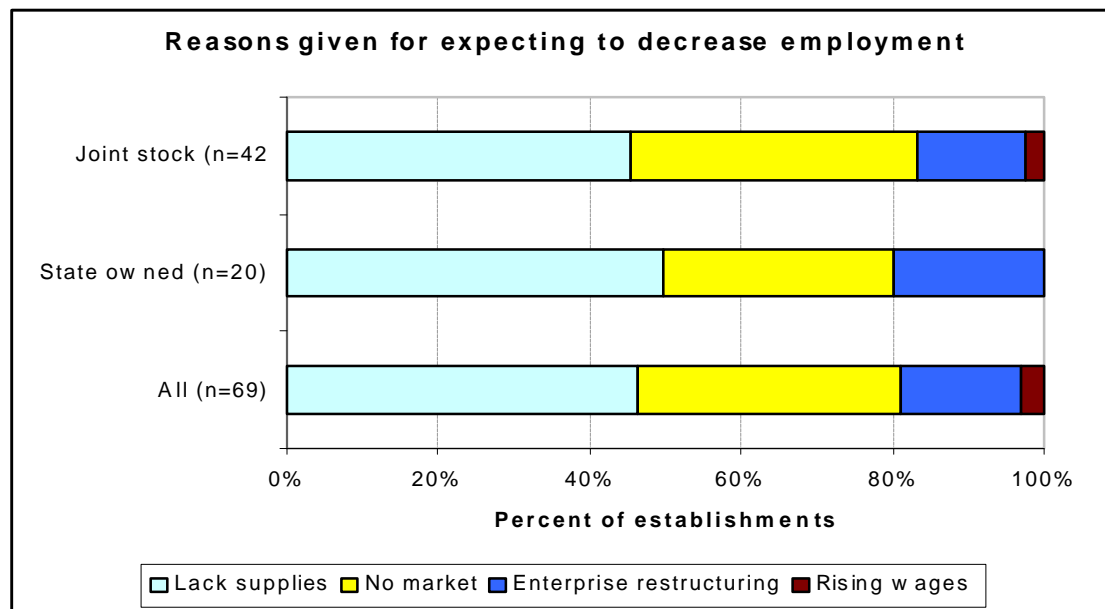
Figure 34. Expected employment change, by property form



Sources: KSIE II.

Managers in joint-stock and state establishments ranked their reasons for expecting employment to decline in the same order: Nearly half of the respondents in each group said that lack of supplies was the principal constraint. Another third identified lack of output market as the reason why employment would likely decrease (38 per cent of the joint-stock and 30 per cent of state-owned establishments). Third most important was enterprise restructuring, somewhat higher among state-owned establishments, which could yet be privatized. Rising wages were not considered a significant influence on labour demand (figure 35).

Figure 35. Reasons given for expecting to decrease employment



Sources: KSIE II.

4.3.2 Managing surplus labour

The hypothesis that employment shedding would take place more rapidly under private management seems not to be supported in the Kyrgyz case. However, additional data is needed to determine whether it was the state-owned establishments which exceeded expectations for shedding labour or whether it was the privatized establishments which failed to shed surplus labour as expected. As shown in section 3 above, despite massive worker dislocation, a third of the survey respondents still retained more workers than they could use productively, reporting on average that 25 per cent of their workers were redundant. This section presents survey findings that suggest that there is very little difference in how joint-stock and state-owned establishments have dealt with the problem of surplus labour.

According to survey data, the joint-stock establishments were both less productive and were more likely to have redundant workers than were the state-owned establishments. The average physical capacity rate was 8 percentage points below the average for state-owned establishments (table 3). Half of all the joint-stock companies reported having redundant workers, compared with just under one quarter of the state-owned establishments. However, the average share of workers considered surplus was similar across both types of establishments, about 25 per cent.

Table 3. Production capacity and labour utilization rates, 1995

Establishments	Average capacity utilization rate	Per cent of establishments with redundant workers	Average per cent of work force redundant
All	36.4%	35.3%	24.5%
Joint-stock	33.2%*	49.2%**	23.1%
State-owned	41.5%	23.8%	26.3%

* Difference between average capacity utilization rates of joint-stock and state-owned establishments is statistically significant

** Difference between proportion of joint-stock and state-owned establishments reporting having redundant workers is statistically significant

Source: KSIE II

As described above, Kyrgyz manufacturers resorted to a number of ways to reduce the costs of retaining employees who were not needed to meet current and anticipated production levels, including placing workers on leave or reduced work schedules, extending maternity leaves, or paying wages late or in-kind. There does not seem to be a different pattern of management practices to reduce the costs of retaining redundant workers by property form. Reducing work schedules and extending maternity leaves were equally as popular among joint-stock as state-owned establishments, and the frequency of extended leaves was even higher among joint-stock companies (table 4).

Table 4. Practices used to manage surplus labour, by property form, 1995

Establishments	Extended leaves		Reduced work time		Maternity Rate (ratio of # women on maternity leave to # female employees)
	Per cent of establishments	Average per cent of employees	Per cent of establishments	Average per cent of employees	
All	79.7%	45.2%	28.0%	63.1%	34.3%
Joint-stock	82.2%*	41.9%	29.6%	60.8%	33.3%
State-owned	72.1%	45.0%	26.2%	63.4%	31.9%

* Differences statistically significant between joint-stock and state-owned establishments at the 5 per cent level.

Source: KSIE II

4.3.3 Multivariate employment models

The survey findings presented thus far suggest that employment trends and management practices between joint-stock and state-owned establishments have not diverged. This conclusion has been drawn from comparisons of joint-stock and state-owned establishments across a range of employment factors. Additional statistical examination is required to compare joint-stock and state-owned establishments' employment records while holding constant other factors which vary across privatized establishments and may independently affect employment performance. Two models were

estimated using ordinary least square regression techniques. The first model examines the relationship between property form and percentage employment change over the 1994-95 period, holding constant other establishment characteristics such as industry sector, initial size, and region location. The second model looks for differences in how joint-stock and state-owned establishments have dealt with the problem of surplus workers. The results of the two models are discussed below and are presented in the Appendix tables 8 and 9.

The results of the first model do not contradict the simpler comparisons presented earlier; the model fails to exhibit evidence of a statistically significant relationship between privatization and employment change. As shown in Appendix table 8, column A, the estimated coefficient on the JOINT STOCK variable fails the statistical test of significance, implying that there was no material difference in employment change between privatized and state-owned establishments.¹⁹ The model provides some evidence that medium-sized establishments had worse employment performance than smaller ones, but the results were inconclusive for the largest establishments. The results also indicate that several other factors that could be expected to affect employment performance, apart from ownership form, and for which data was collected, did not appear to be related to employment change.

First, it could be hypothesized that establishments with a higher portion of unskilled workers would find it more difficult to adapt to rapid change and might shed a greater share of employment. However, the model found no statistical relationship between skill structure (measured as per cent of work force unskilled) and employment change.

Second, management selection by workers or enterprise boards, as opposed to appointment by government agencies, could be an indication of change associated with improved productivity and employment growth. But, again, establishments which had selected their own senior managers recorded no greater employment growth on average than those that had not.

Third, although itself a performance indicator, it could be hypothesized that establishments that had been able to maintain access to export markets might have better employment performance regardless of ownership structure. The model shows no relationship, however, between higher share of output exported and employment change.

The second model was specified to examine more closely whether privatized firms, responding more to market pressures, were less likely to retain surplus workers. In this model the same explanatory variables were used as in the employment change model to investigate the relationship between property form and the propensity to retain surplus workers (measured as redundant workers' share of total establishment work force).

The model results do not provide any evidence that joint-stock establishments were less likely to shed surplus workers (Appendix table 9, column A). The JOINT STOCK variable again has a very low t-statistic. The results do indicate, however, that establishments located in Bishkek were less likely to retain surplus workers than establishments elsewhere. This can probably be attributed to the somewhat better opportunities for alternative employment or self-employment available in the Capital than in less urban areas. As in the employment change model, the results provide no evidence that export performance, skill distribution, establishment selection of management, or property form explained variation in retaining surplus workers across establishments.

¹⁹This model, and the variations described below, was estimated separately including two other non-government property forms in the set of privatized establishments: 7 limited liability companies and 10 establishments owned by private individuals, in addition to the joint-stock companies. The results of the model were not altered in any material way by their inclusion.

One possible explanation for the similarity of employment practices could be that establishments had been privatized only recently and had not had time to carry out reforms. Therefore the same models were re-estimated constraining the set of joint-stock establishments to those which had been privatized for at least two years. This change had no measurable impact on the model results (Column B of Appendix tables 8 and 9).

Overall, these models fail to explain differences in employment trends and practices (as evidenced in the extremely low R-square statistics). They are simply one additional method of examining the survey data which indicate that thus far, changing property forms alone has not contributed to productive use of labour resources. The underutilisation of employees as well as the dislocation of industrial workers remains substantial in both state-owned and joint-stock establishments.

5. Human Resources Development

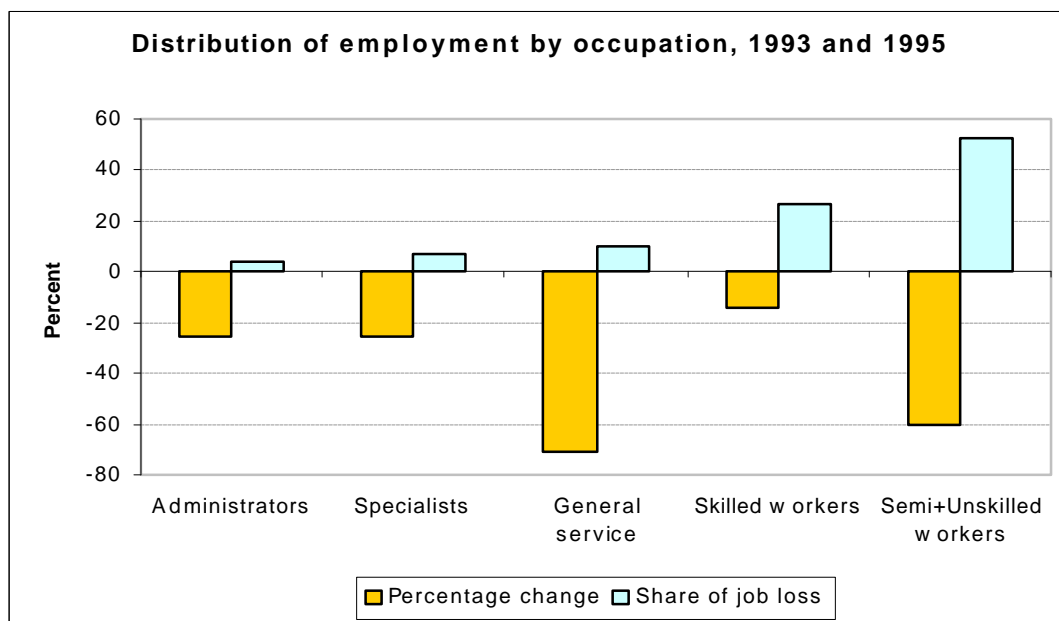
This section analyses the survey evidence on qualitative changes in employment relevant to policy questions on human resources development. Specifically, it examines the evidence on occupational shifts in employment, training, and provision of social services. It also questions whether the distribution of employment opportunities has become less equitable during the transition crisis.

5.1 Training needs and practices

As was reported in the discussion of job loss, displacement in manufacturing fell heaviest on the semi- and un-skilled workers. Their share of total employment in the surveyed establishments fell from 26 per cent to 15 per cent from 1993 to 1995. This section presents additional survey findings on changes in skill and occupation mix during the transition process. It contrasts managers' expectations for the type of workers they expect to need with the training they are able to provide their workers.

The effects of restructuring in the manufacturing sector between 1993 and 1995 on the occupational mix of the work force are displayed in figure 36. The upper portion of the figure shows the distribution of job loss across occupations, with semi- and un-skilled workers accounting for over 40 per cent of all lost jobs. The lower portion shows job loss in each occupation as a percentage of its 1993 level. The general service category accounted for 10 per cent of overall job loss but this represented 64 per cent of the all general service jobs filled in 1993. The job loss in the unskilled category was an equally drastic 61 per cent. Job loss was lowest in percentage terms for skilled workers (15 per cent), followed by managers and professionals (20 per cent each).

Figure 36. Distribution of employment by occupation, 1993 and 1995



Sources: KSIE I and II.

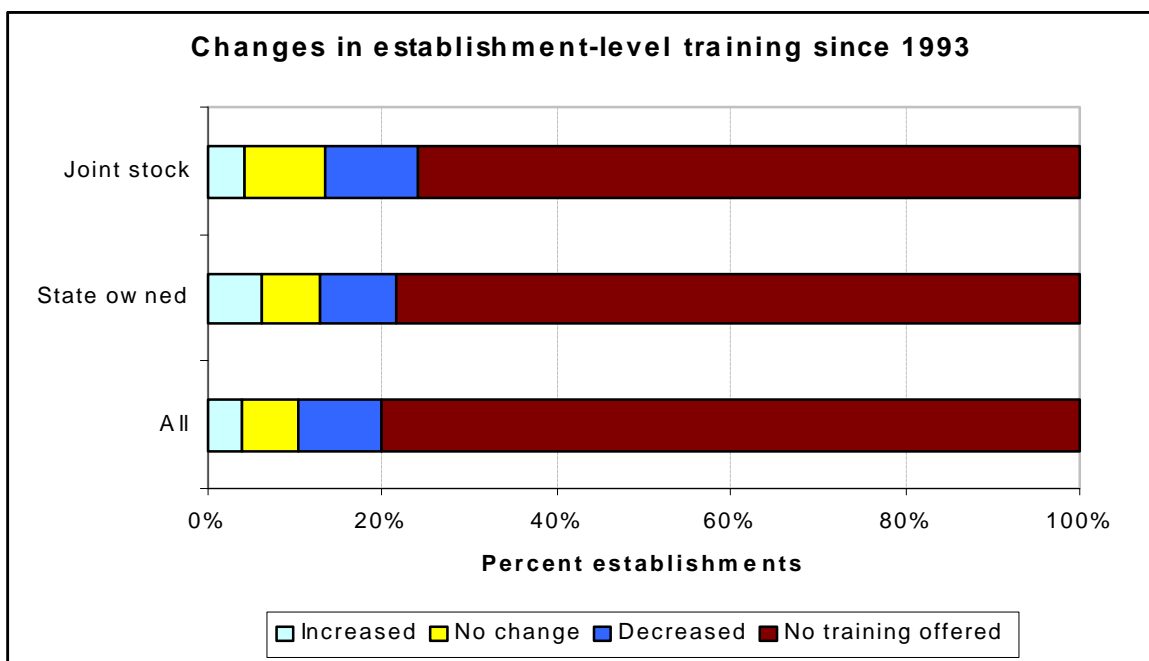
Managers were asked about the future mix of occupations, and the answers indicate that the enormous losses in the general service and low-skilled categories are not likely to be recovered. Only 21 establishments expected to increase the relative share of any occupation; 17 of these expected the share of skilled workers to increase. Twice as many establishments reported that some occupations would decrease in relative terms, but they were evenly split between expecting to decrease the share of administrators or the share of semi- and un-skilled workers (table 5). Because of the very low response rate, no strong comparisons can be drawn between the joint-stock and state-owned establishments. It is perhaps notable, however, that most of the establishments expecting to increase the share of skilled workers were joint-stock companies.

Table 5. Occupational changes expected, by property form

	No. establishments expecting to increase occupational share			No. establishments expecting to decrease occupational share		
	All	Joint-stock	State-owned	All	Joint-stock	State-owned
Administrators/ Managers	1	1	0	12	9	3
Specialists	2	2	0	6	4	2
General service workers	0	0	0	5	2	1
Skilled workers	17	10	4	8	5	2
Semi+unskilled workers	1	0	1	12	7	3

Source: KSIE II

Despite the indications that the work force needed in the near future will favour skilled workers, very few establishments reported that they provided any training to their employees. As shown in figure 37, 80 per cent of establishments provide no training at all and another 10 per cent had decreased training since 1993. *During the massive restructuring, only one out of twenty-five establishments was investing in human capital.* Of the nearly 90,000 workers employed by the surveyed establishments, fewer than 4,000 received any training in 1995, or less than five per cent.

Figure 37. Changes in establishment-level training since 1993

Sources: KSIE II.

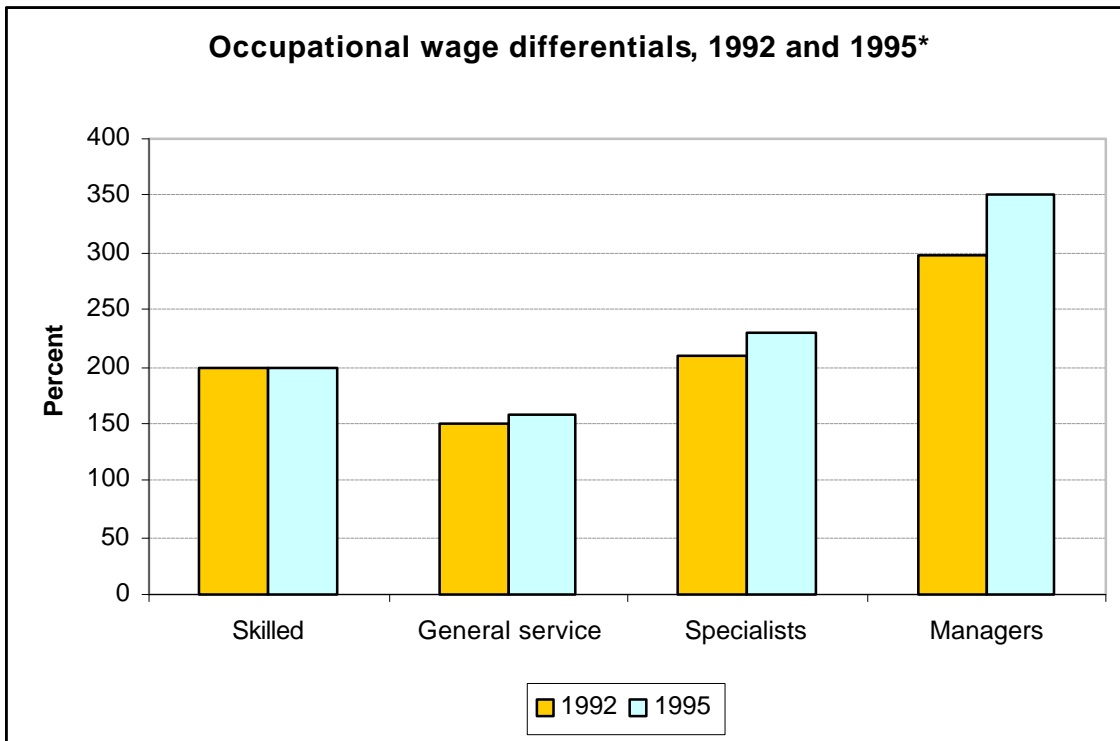
Two conclusions can be drawn from the evidence on occupational restructuring by manufacturers. First, there is a clear premium on work skills. Although having a trade or profession has been no guarantee against job loss in the economic depression, establishments' efforts to retain their skilled workers is an indication of what they will be looking for in new workers when economic growth enables them to rehire. Second, the loss of over 20,000 jobs in the semi- or unskilled category represents a challenge to human resource development strategy - by national governments, local schools and within enterprises. Re-deploying displaced low-skilled workers is likely to require investments in re-training -- investments that will have to be shared by workers, government and employers.

5.2 Wages and benefits

This section summarizes survey findings on two issues pertinent to human resources development policy: wage differentials between occupations and changes in the role of the employer as principal provider of basic social services. Information gleaned from the survey on establishments' problems meeting their payrolls (wage arrears and payments in-kind) was discussed above (Section 3.4). The survey findings indicated that most establishments had experienced delays in paying workers due to inability to find buyers able to pay cash for their purchases. Even so, average wages seemed inadequate to provide for basic consumption needs: *The average wage of semi- or unskilled workers in the surveyed establishments was 274 soms per month (approximately US\$25), while the UNDP reported the government's estimate that the price of a month's supply of basic food products was 189 som in October, 1995.*²⁰

Under the socialist systems, wage differences within the work place were typically quite low, with a narrow range of wages from unskilled workers to top managers. This was borne out in the evidence from the first Kyrgyz survey of manufacturers: Within establishments, managers' wages were just three times higher than the average wage earned by semi- or unskilled workers. It could be expected that returns to skills might have increased in the interim, given the high proportion of unskilled among the displaced workers and premium on new skills and managerial ability. However, *the wage dispersion between unskilled workers, skilled workers and managers in 1995 was nearly identical to the 1992 figures (figure 38).*

²⁰UNDP, *Kyrgyz Republic National Human Development Report, 1996.*

Figure 38. Occupational wage differentials, 1992 and 1995*

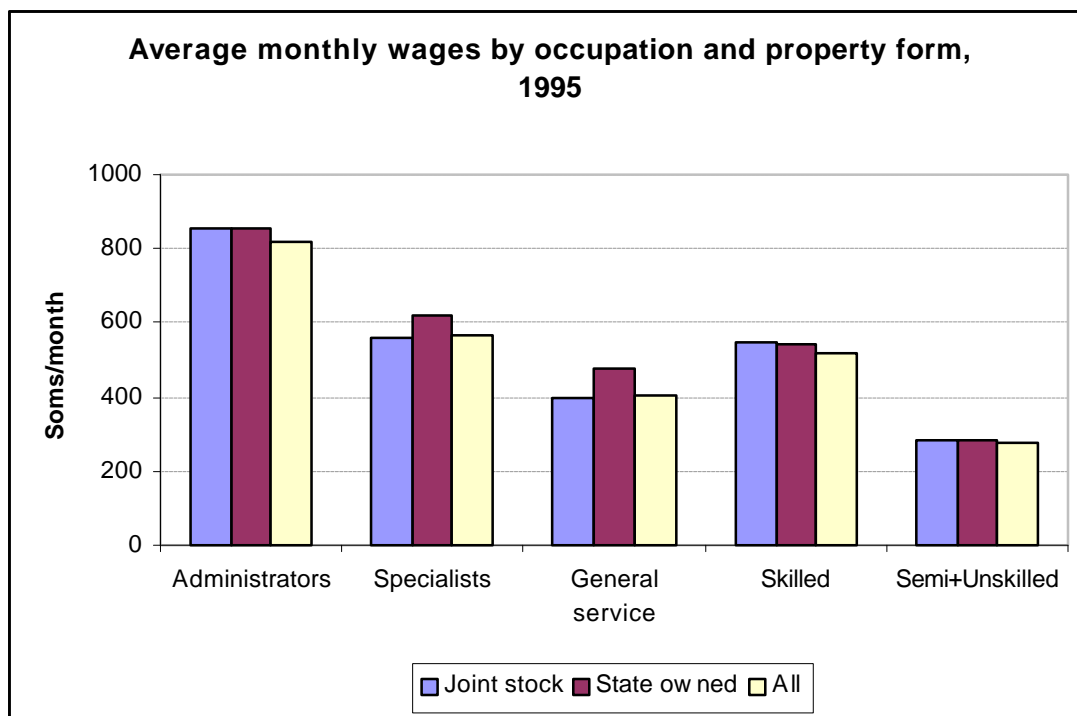
Sources: KSIE I and II.

*Monthly occupation wage as percentage of wage for semi and unskilled occupation, averaged across establishments.

This pattern of wage differentials has not been affected by privatization, notable not only in the 1992-95 comparison made above, but also in the direct comparison of average wages between joint-stock and state-owned establishments in the most recent year (figure 39). For all occupations, average wages were slightly higher in the state sector, except for skilled workers where they were identical. However, in only one occupation category, general service workers, was this difference significant.²¹ The wage differentials between occupation categories were not greater for the privatized establishments than for those still state-owned. *This indicates that remuneration systems have not changed as part of the change in property form and ownership structure.*

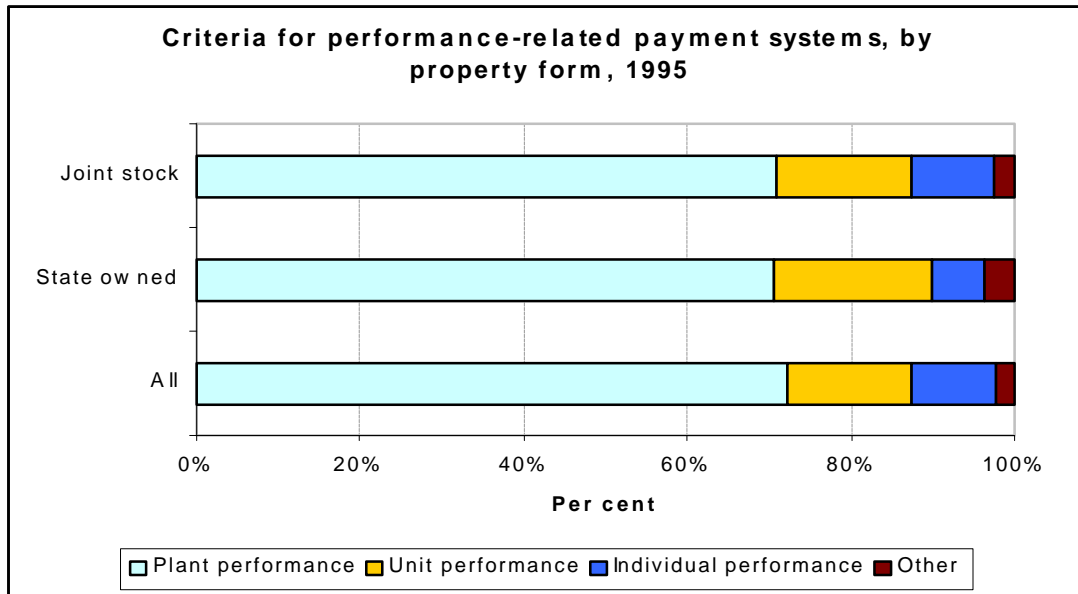
²¹The difference between the average wage across state-owned and joint-stock establishments was statistically significant at the 10 per cent level.

Figure 39. Average monthly wages by occupation and property form, 1995



Source: KSIE II.

The data also show that non-wage payments continue to comprise a substantial part of earnings. Half of the surveyed establishments reported that they operated a performance-related payment system for their production workers, and that such bonuses accounted for 50 per cent of average earnings. Bonuses accounted for the same share of earnings, on average, across joint-stock and state-owned establishments. The criteria determining the amount of this payment were also markedly similar. Seventy per cent of the establishments in each group cited plant performance as the principal determining factor (figure 40). Performance of a unit within the establishment was the second most commonly-cited factor (by 15 per cent of all establishments), followed by individual performance (by 10 per cent).

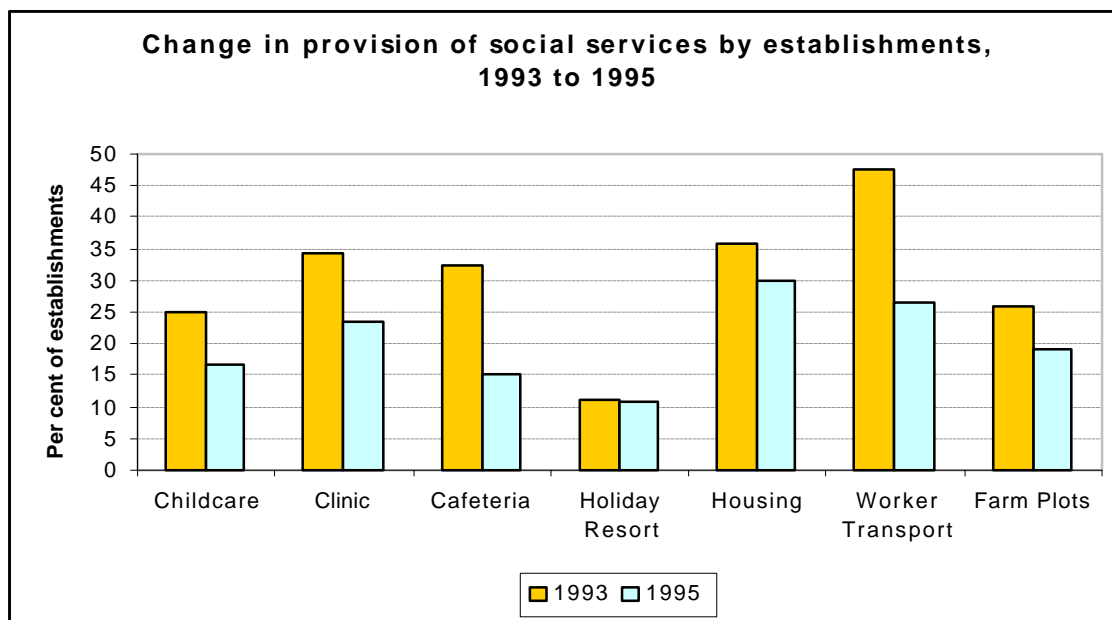
Figure 40. Criteria for performance-related payment systems, by property form, 1995

Source: KSIE II; n=106, establishments that had performance-related bonuses.

The low wages in general and low returns to higher skilled and professional jobs were partially compensated by employer-provided services. The full costs of housing, education, medical care and vacations were kept low to employees as they were considered social entitlements and provided by the state, often directly through employers rather than through revenue collection and state expenditures. Kyrgyz manufacturers have come under enormous pressure to reduce social benefits and shed units providing utilities or social services to their communities as part of their restructuring process and becoming profit-oriented. The survey documents the trend in cutting social services. Interviews with plant directors and local officials show that a new definition of “public” services has yet to be articulated and that neither local nor national government agencies have had the means to replace establishment-provided services.

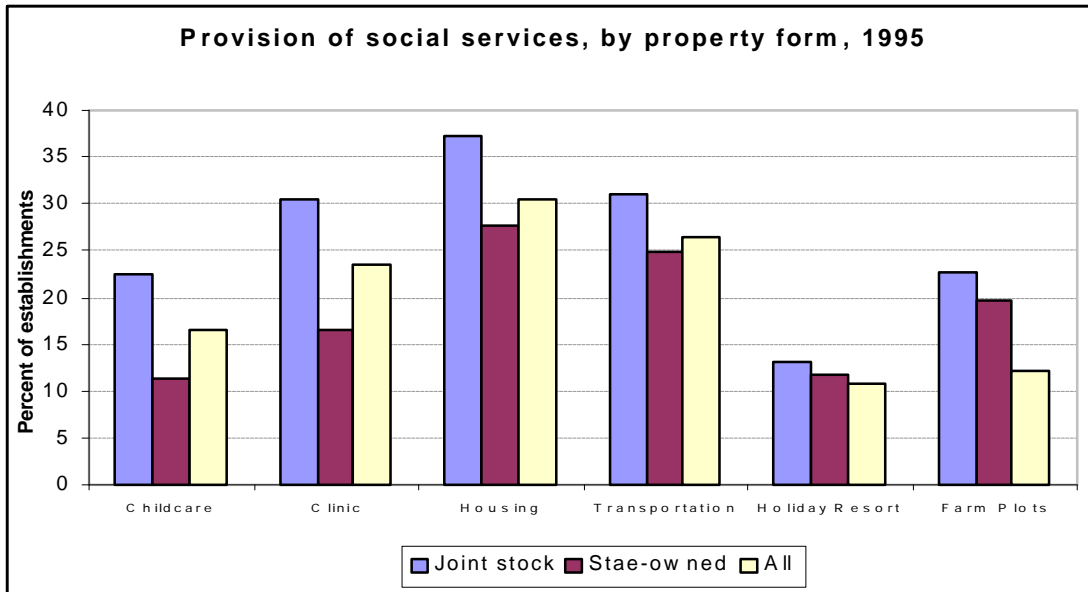
As shown in figure 41, provision of transportation to work, subsidized cafeterias, on-site clinics, and child-care facilities have declined the most. Housing was the most frequently provided benefit, by one third of all establishments, and its provision by employers decreased only slightly between 1993 and 1995. *The linkage between housing and employment may explain much of the rationality to maintain formal ties to employers for workers placed on unpaid administrative or maternity leave.* Employees in large establishments were much more likely to receive these benefits from their employers than were workers in smaller establishments. Almost 90 per cent of establishments with more than 1000 employees provided housing to their workers, compared to 50 per cent of medium-sized establishments and under 10 per cent of those with fewer than 100 employees. A similar decline in provision of clinics and child care was evident between larger and smaller employers (Appendix table 10).

Figure 41. Change in provision of social services by establishments, 1993 to 1995



Sources: KSIE I and II.

The trend away from employer-provided services can be expected to continue. First, a re-definition of what is properly the “private” sphere, as establishments change ownership forms, motivates employers to cut costs by reducing benefits. Second, as large establishments are broken up through privatization into smaller units, the economies of scale are lost which make it even more difficult for employers to provide the same range or quality of services. The paradigm shift - that governments and the private sector should assume responsibility for provision of basic social services - would lead us to expect that state-owned establishments would be more likely than privatized ones to continue to provide social services. The evidence from the survey, however, is just the reverse. In all of the principal types of social services, the frequency of provision was higher among joint-stock than among state-owned establishments (figure 42). These findings are most surprising for employer-provided housing since selling apartments to workers was often part of the privatization process, yet 37 per cent of the joint-stock companies provided housing in 1995, compared to 28 per cent of state-owned establishments.

Figure 42. Provision of social services, by property form, 1995

Source: KSIE II.

As the Kyrgyz economy emerges from depression, it can be expected that wage rates will become more flexible and will adjust to attract desired workers or discourage low-productive workers. To the extent that higher wages give incentives to workers to invest in their own education and training and reflect higher productivity, broader wage differentials between skill levels should emerge as part of a better functioning labour market. If this trend comes in conflict with social objectives of “fair” income distribution, other means may have to substitute for this role played by official wages under the previous economic system (such as increased investments in training for low-skilled workers or a minimum wage that provides adequate subsistence income). Job displacement, or loss of earnings or benefits, are the principal forces now contributing to growth of income inequality.

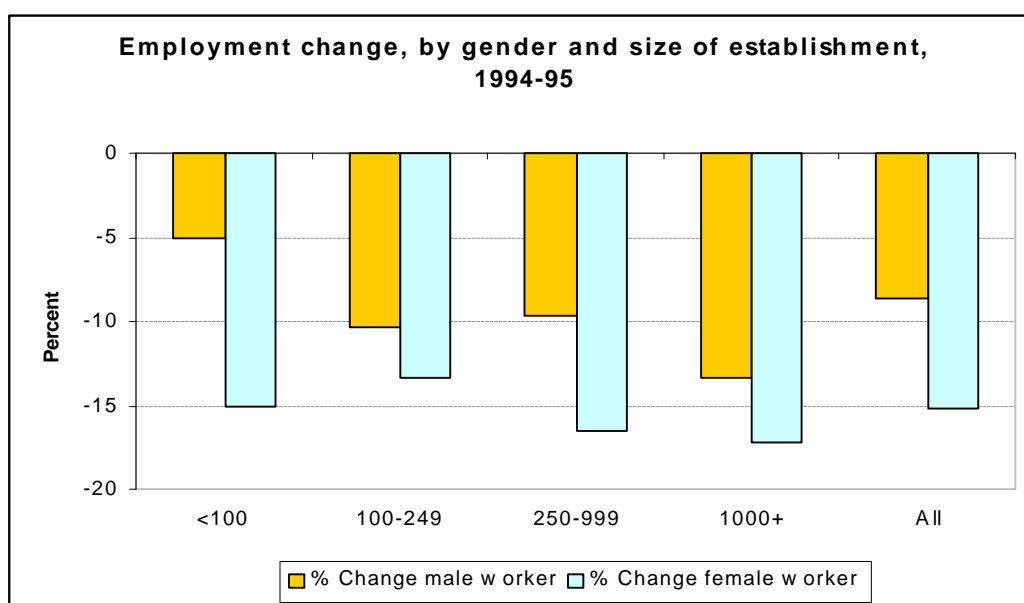
5.3 Changes in women’s employment

Another distribution concern is the relative effects of establishment restructuring on women in the labour market. As noted above, at the beginning of the 1990s women accounted for slightly more than half of all jobs in manufacturing. However, *two-thirds of all jobs lost from 1993 to 1995 in the surveyed manufacturers had been held by women*. In the last period covered by the survey, the first three quarters of 1995, employment of women fell by 18 per cent, compared to a 10 per cent drop in the number of men employed.

Employment of women declined by 15 per cent on average across all establishments from 1994 to 1995, compared to an average decline of 9 per cent for men. The percentage change was nearly identical between joint-stock and state-owned establishments but differed widely between smaller and larger establishments. Women in small establishments, those with fewer than 100

employees in December 1994, were most likely to lose their jobs: on average, small establishments decreased employment of women by 15 per cent, compared to just under 5 per cent for men (figure 43). Share of job loss appeared to be more equitably distributed between men and women in larger establishments. The survey did not collect surplus labour data separately for women, but did document that for every three women employed, one was listed as on maternity leave. Women's disproportionate share of job displacement, their share of unemployment hidden by administrative leaves, reduced schedules and unpaid work time in addition to extended maternity leaves, adds up to an enormous burden paid by women workers during the restructuring and transition process.

Figure 43. Employment change, by gender and size of establishment, 1994-1995



Source: KSIE II.

These findings contrast sharply with conclusions drawn from the first Kyrgyz survey of manufacturers. At that time, gender patterns not only in job displacement, but also in recruitment and training showed no disproportionate effect on the employment position of women.²² However, analysis of the data from the follow-on survey suggests that in these areas also discrimination against women may be growing:

- C In the area of *recruitment*, of those establishments that reported hiring any workers at all in 1995, *women accounted for less than one third of new hires*. Across all establishments, their share of new hires was 27 per cent and did not differ between state-owned and joint-stock establishments.
- C About one out of ten respondents expected that the employment share of women would decrease in the upcoming nine months, while fewer than one out of twenty expected women's

²²Jim Windell and Guy Standing, "Women and other vulnerable groups in Kyrgyz industry," paper presented at the Workshop on enterprise and employment restructuring in Kyrgyz industry, December 1994, Bishkek.

share to increase. Most establishments, however, either expected no shift in women's share of employment (72 per cent) or did not know (15 per cent).

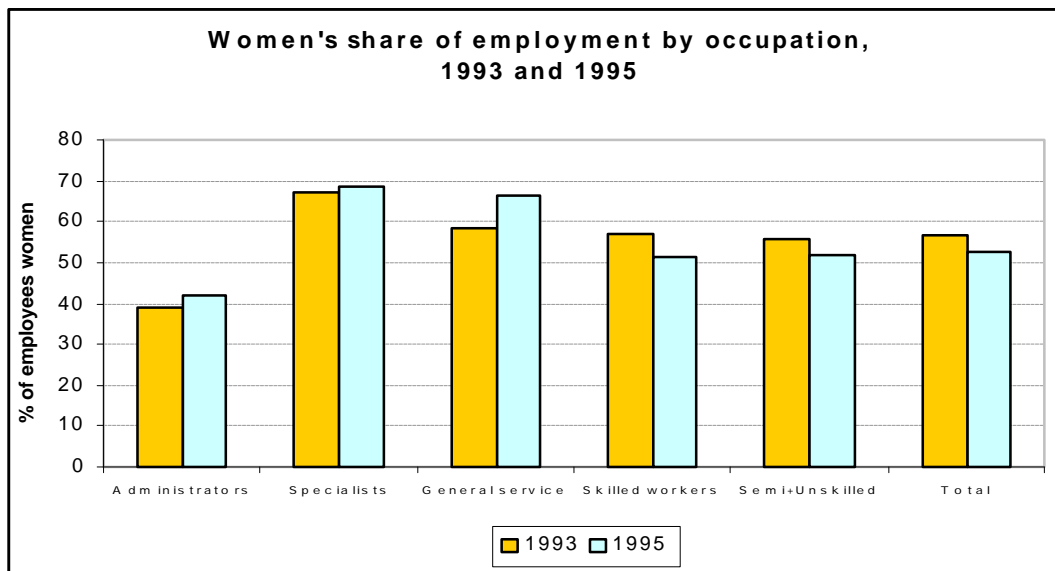
C The average share of the work force receiving *training* from their employers was 11 per cent (across the one fifth of respondents which reported providing any training). These establishments reported that *on average only one out of five trainees were women*.

C Women's share of trainees was much lower on average in the joint-stock establishments, 16 per cent compared to 33 per cent in the state-owned establishments.²³

C Finally, women's participation in their employers' training programmes decreased from 24 per cent in 1994 to 21 per cent in 1995.

These findings are sobering not only for demonstrating that women's employment has become more precarious than men's, but because the data on recruitment and training indicate that their position may deteriorate further. So far the effects of women being laid off first and retrained last have not resulted in substantial change in the occupational mix by gender. As shown in figure 44, women's share of employment has declined only slightly in the skilled and unskilled workers categories, and increased slightly in administration management and professional positions.

Figure 44. Women's share of employment by occupation, 1993 and 1995



Sources: KSIE I and II.

One explanation for the disproportionate share of job loss by women is that women initially held onto jobs in order to maintain family access to social benefits provided by employers, even if they were placed on leave without pay. Over time, as either social services were cut back or the probability of earning income receded, more women left voluntarily or were retrenched. Another explanation suggested by women managers interviewed in Bishkek is that the preference to retain male employees, especially in managerial and professional positions, is rising, in a notable shift from

²³The difference between average share of trainees that were women in joint-stock and state-owned establishments was significant at the 10 per cent level.

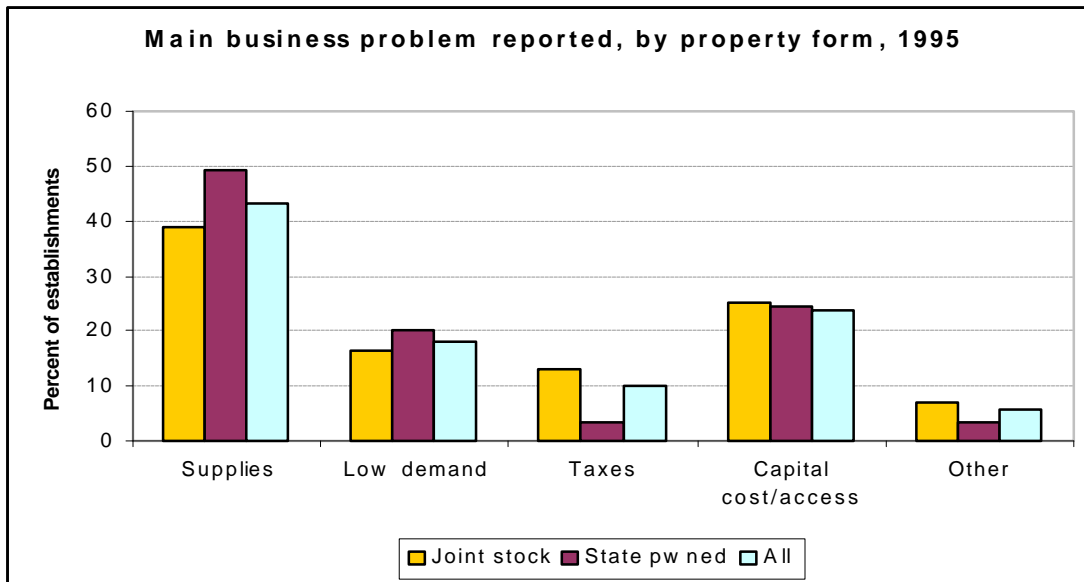
Soviet times. Such a tendency could be accentuated by persisting labour surplus which enables managers to be more selective in hiring procedures or prejudicial in favour of men as “family earners” when retrenching workers or putting them on leave.

6. Implications of survey findings for employment generation policy

Previous sections documented job loss and changes in employment security, remuneration and benefits. This section begins with the survey results of how managers ranked their business problems and identified constraints on business growth and job creation. The following brief discussion of these problems draws also on information gathered directly from interviews with business directors in 1996. The purpose of this section of the report is to draw attention to policy changes and market-enhancing institutions that could improve the *external* business climate for Kyrgyz manufacturers and facilitate the growth that was anticipated from the initial step of *internal*, or property form, changes.

6.1 Main problems identified by survey respondents

Survey respondents were asked to identify the main problem they had faced in the previous twelve months. Their responses, collected by type of establishment, are shown in figure 45. They reported their most serious problem to be difficulties obtaining raw materials, including energy and intermediate goods. Two out of five respondents selected this as the principal problem in running their business. This shows clearly that the disruptions in supply networks due to the breakup of the former Soviet Union have not been restored nor replaced. Difficulties accessing investment or working capital was the second most frequently cited difficulty: The combined problems of lack of investment capital and inefficient banking systems were cited by one out of four respondents. One out of five managers ranked declining demand for their products, either in the Kyrgyz Republic or throughout the CIS countries, as their most pressing difficulty.

Figure 45. Main business problem reported, by property form, 1995

Source: KSIE II.

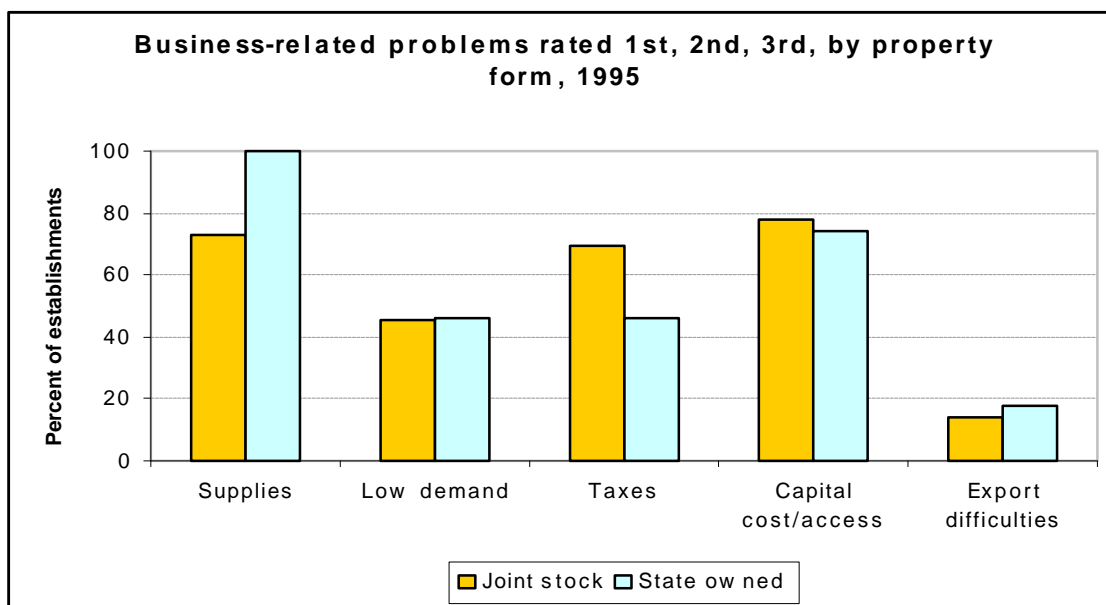
Discouragingly, this ranking of problems is precisely the same as was given by respondents to the first survey, describing their business difficulties in 1993. Evidently, over that two-year period, establishment managers had not found it easier to source supplies, find buyers, or raise capital. This is a striking indictment of the lack of progress in developing trade and credit policies conducive to business growth. The only difference of note is that in 1993 taxes were considered the main business problem by only 5 per cent of respondents. In 1995 this share had doubled, with one out of ten respondents naming high taxation as their principal business concern. Thus in addition to not improving the business climate in terms of markets and banking institutions, the policy environment was deemed to have become more burdensome with higher taxes, and greater emphasis on revenue collection.

Managers of joint-stock companies viewed their business problems only slightly differently than their counterparts at state-owned establishments (also shown in figure 45). Although obtaining raw materials was the most often cited problem by managers in both types of establishments, 40 per cent of the managers of privatized companies considered it the main business problem, compared to 50 per cent of the managers at state-owned establishments. The principal difference, which is less surprising, is that the share of managers of joint-stock companies that cited taxes as their most important problem was three times higher than the share among state-owned establishments.

The extent to which taxation has grown in importance is more evident in figure 46, where establishments' responses have been combined, so that for each problem the table shows the share of managers which selected it as their first, second or third most pressing problem. This presents a more accurate picture of the importance business managers place on each of these policy areas, than when in fact, asking them to select only one important problem. Taxes were identified by two thirds of the managers as an important business problem. Investment capital alone was the third most

common problem, but added together with related banking problems (high interest rates, the banking system) it becomes apparent that managers of joint-stock companies considered inadequate access to capital to be as serious a problem as sourcing material inputs. State-owned establishments evidently did not enjoy preferential access to scarce credit, as the share of their managers regarding banking and credit as major problems was nearly identical to the share of managers at joint-stock companies.

Figure 46. Business-related problems rated 1st, 2nd or 3rd, by property form, 1995



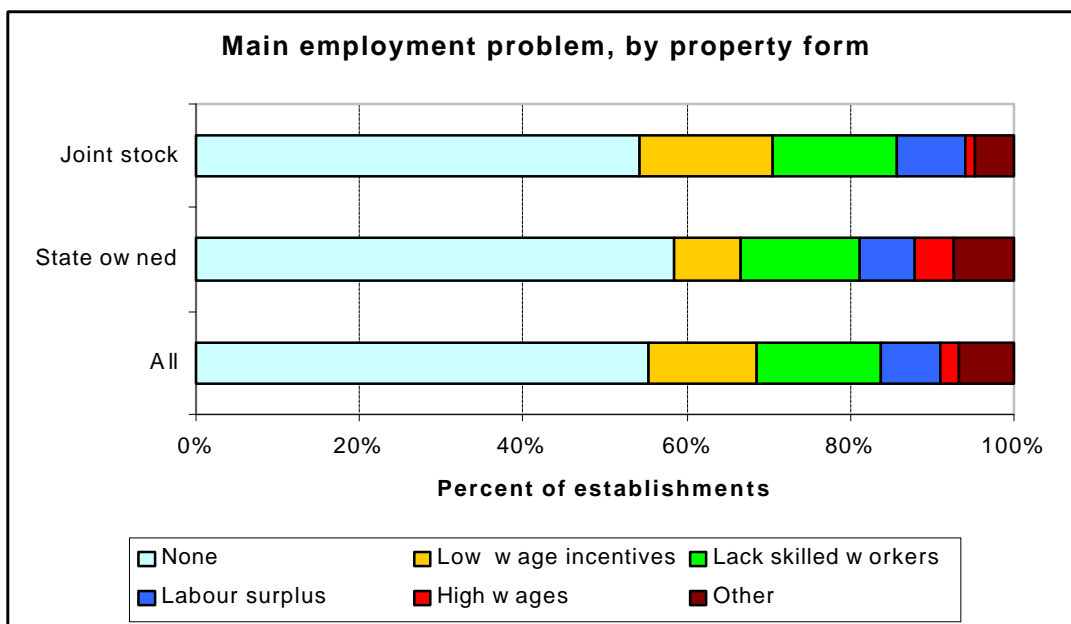
Source: KSIE II.

There are also some interesting lessons to draw from what managers did *not* identify as their main problems, or what were identified as problems by small minorities of managers and collected as “other problems” in the above tables. Kyrgyz manufacturers are in the enviable position of no longer facing high inflation rates, but, as obvious above, have paid a price in terms of lack of liquidity in the economy. Despite the obvious difficulties managers have had through the transition process, only 7 considered that “the need for improved market-oriented skills among management” was one of their top three problems. Only 5 managers considered lack of access to technology or equipment as a top priority, and only 6 considered government regulations particularly burdensome. For example in response to a separate question, *only one out of five respondents said that severance pay requirements influenced their firing decisions*. While these responses underscore for policy makers where business decision-makers feel policy improvements would be most helpful, the lack of recognition that management training might be instrumental only makes it more apparent that it is indeed needed.

Apart from these general business problems, managers were asked to identify their principal *employment problem*. As shown in figure 47, the majority responded that none of the proffered employment problems listed on the questionnaire were considered serious. This is in itself an

important indication that the majority of the business managers, in both privatized and state-owned establishments, consider conditions external to the enterprise as the most serious constraints. Of the nearly half of respondents that did identify employment problems, *the two most common problems were the lack of skilled workers and low wage incentives* (each accounting for about one third of the responses). The main difference of views expressed by managers of joint-stock and state-owned establishments was the former's greater tendency to regard low wage incentives as a significant problem (36 per cent versus 20 per cent of managers at state-owned establishments). Managing surplus labour was the third most often cited employment difficulty, by 17 per cent of the respondents. Low worker quality and wages were each cited as the main employment problem by about 5 per cent of respondents.

Figure 47. Main employment problem, by property form



Source: KSIE II.

Despite these difficulties, 20 per cent of the respondents reported an increase in sales and 14 per cent reported that they had increased employment over the preceding year. (However, only eight out of over 200 respondents reported an increase in both sales and employment.) The enterprises in these sub-sets of “better performers” were distributed fairly evenly across regions, industries, and, most interestingly, property forms.

Among the 33 respondents that had increased employment, the average percentage change was 9 per cent. Compared to the larger group that had not increased employment, on average they did not have higher skilled workforce, were not more likely to provide training or to have a performance-based wage system, and did not export a higher share of their output.

One might expect, or hope, that the employment gains could be associated with better governance structures. However, the share of the 33 employment-gainers that were state-owned was higher than among the set of establishments with static or declining employment. A slightly higher

share of state-owned enterprises than of privatized ones reported an increase in employment, 17 per cent versus 12 per cent. Even establishments that had been privatized for at least two years had a lower likelihood of reporting employment increases (12 per cent) relative to those that had been privatized more recently (17 per cent). A higher share of the establishments with state-appointed top managers reported employment gains (36 per cent) than of establishments where enterprise boards or employees had selected the manager (18 per cent).

Also surprisingly, these employment-gainers were, on average, using less than half of their physical capacity, 44 per cent, although this was significantly higher than the average capacity utilization among the rest of the respondents, 35 per cent. As expected, the employment-gainers were not among the largest firms, but they were fairly evenly distributed across small and medium-size classes of enterprises: 16 per cent of establishments with fewer than 100 workers and 15 per cent of those with 100 to 500 workers had increased employment.

6.2 Enabling policy environment for establishment adjustment

This section draws out the implications of these findings on how public policy could improve the ability of enterprises to stay in production and generate jobs.²⁴ The section follows the ranking of business problems revealed by managers: market disruptions for supplies and output, inability to access credit, and taxation and other fiscal policies. It is followed by a brief discussion of labour market policy and the relationship of the privatization process to employment creation.

6.2.1 Market development and trade policies

With no local financing available and previous supply networks disrupted, many managers reported that their survival hinged on attracting foreign investment and on securing foreign sources of raw materials. In the agricultural sector, problems both inherited from the command economy and due to the privatization process had seriously undermined local food processing industries. For example, a meat packer in Bishkek imported beef carcasses from Germany because farmers had not yet been able to build back herds slaughtered several years previous when livestock, but not feed nor pasture, had been privatised. The largest sugar producer, and one of the best known and most successful companies in the country, had long been forced to procure sugar cane from the Caribbean because over farming had ruined local capacity to grow sugar beets. Agricultural processing industries should be viable in the long-term, as problems in the agricultural sector are resolved.

Meanwhile, in 1996, some business and labour leaders questioned whether trade policies were deterring rather than hastening recovery in the agricultural-processing industries. For example, because domestic processors had no cash, farmers were willing to sell cotton, wool, silk cocoons and skins at far below market prices to foreign buyers. With no access to operating capital and no customers with cash to advance, Kyrgyz textile manufacturers were relying on export taxes on unprocessed agricultural products to keep some raw materials available in the country. Reportedly, silk cocoons were being sold for 10 per cent of value and smuggled across southern borders, further

²⁴ For broader reviews of economic policies and privatisation in the Kyrgyz Republic, see World Bank, "The Kyrgyz Republic, Poverty Assessment and Strategy," 30 May 1995; UNDP, "Kyrgyz Republic, National Human Development Report, 1996; Max Spoor, "Upheaval along the silk route, the dynamics of economic transition in Central Asia," Institute of Social Studies, April 1996; and Wladyslaw Jermakowicz and Julian Pankow, "Privatisation in the Kyrgyz Republic," *Russian and East European Finance and Trade*, 1994.

depressing the domestic silk textile industry. However, the Kyrgyz government has entered into a number of agreements to restore trade relations among Commonwealth of Independent States, including joining the customs union of the CIS in 1996, and has tried to develop new trade partners, including signing a trade agreement with China in 1994.

A particular adjustment challenge faced by large manufacturers in the heavy manufacturing sector was their prior role as defence suppliers to the Soviet Union. Although civilian producers had also seen their supply and output markets disappear with the breakup of the Soviet Union, the defence producers were trying to create new civilian products as well as forge new market relationships. Their single advantage was that they seemed to have more up-to-date technologies and equipment than typical non-defence firms. On the other hand, they continued to be required to devote part of their production capacity to military production, under state control, which handicapped them in arranging foreign partnerships or attracting foreign investment. The largest military producer displayed a dozen civilian products it had developed--from machine tools to household appliances--but the volume of sales required only a small fraction of the idle plant capacity.

Among the few plants visited there were some successful instances of entering new markets. A defence plant had converted one of its facilities to producing semiconductors for a Japanese company, which shipped both components and final products via the trans-Siberian railroad. The director of the plant attributed the interest of the Japanese multinational in investing in Kyrgyzstan to its lower wages compared to offshore manufacturing sites closer to Japan.

C *Policies to open new markets and help establishments improve technology or receive injections of foreign capital will need to target specific industries. In some cases, the objective must be to help establishments develop new products because previous production was sustainable only because of subsidized procurement of foreign-sourced materials. In industries based on processing agricultural and mineral products, however, in which Kyrgyzstan has a natural advantage, attention must focus on improving agricultural production and management. In the long run, successful adjustment in the agricultural sector is crucial to prospects in manufacturing.*

C *The combination of low wages, universal secondary education, and experienced industrial workers gives the Kyrgyz Republic some valuable assets in competing for foreign investment. However, the long-term viability of being a low-wage export-production platform is limited due both to high transport costs to world markets and upward pressure on real wages as a greater portion of basic consumption goods and services will have to be "purchased" by individuals rather than "received" from employers. Sustained interest by multinationals will require investments in training, transportation and communication infrastructure in order for Kyrgyz manufacturers to remain competitive in higher value-added production.*

6.2.2 Banking and credit institutions

In striving to modernize and adjust, firms are handicapped by the severe shortage of capital and investment funds. Enterprises must invest in new equipment to downsize plants to economically efficient scale, appropriate to new smaller markets, and to convert to new products or improve quality of current products. The Republic has succeeded in controlling inflation through strict monetary policy but by 1996 many banks were on the verge of bankruptcy and development of alternative, small-scale finance institutions was limited. Most businesses reported that they were in debt for back taxes, owed payments to suppliers as well as back wages to their employees, so even if banks had

money to lend most businesses would not have been found credit-worthy.

The fact that businesses find themselves in these quandaries is not necessarily due to poor management or resistance to change, but may be inevitable consequences of the enormous upheaval throughout the economy. For example, the plant manager at a bakery visited in a rural community was trying to finance buying smaller ovens to bring production scale down to a more economical level after losing 50 per cent of its market to start-up specialist bakeries. Part of her difficulty financing investment, as well as in meeting current expenses, was the failure of state agencies to pay for bread which the bakery was obliged to continue to deliver to medical and education institutions--a "market" its new competitors did not have to accept.

As the large state enterprises permanently reduce the size of their operations, policies are needed to promote development of small and medium-sized manufacturers. Managers clearly indicated in the survey that lack of effective banking institutions and means of obtaining operational and investment capital was a serious obstacle to this process. This was the case even for large, state-owned establishments; the prospects for new, small businesses to access startup capital, in an economy where such enterprises in the manufacturing sector were unknown, have proven to be particularly low.

C *Development of new credit institutions conducive to entrepreneurship and small business growth will be key determinants of the success of programmes to promote small and medium-sized businesses.* Examples of such institutions that merit consideration include rotating credit funds, small-business cooperatives, and government-subsidized small business loans.

C *Further trade liberalization will fail to achieve its potential to improve the efficiency of Kyrgyz manufacturers unless market failures in the credit and financial sectors can be resolved.*

6.2.3 Taxes and public expenditures

In 1991, union transfers accounted for a third of total government revenue. The government responded to the loss of these transfers and the decline in tax revenue due to general economic dislocation by drastically cutting expenditures and gradually trying to build up tax revenue collection.²⁵ Managers at several of the large enterprises visited criticized the privatization strategy for placing higher priority on relieving government deficits than on investing in productivity, marketing networks and long-term viability. For example, the principal purpose of a \$60 million privatisation promotion programme funded by the World Bank was to remove large deficit-running enterprises from the public sector. Half of the money had been budgeted for hiring consultants to assess the viability of selected enterprises, to detach non-profitable units or public services, and to provide income allowances to workers during the assessment or initial shut-down period. The other half was transferred directly to the government budget. The programme had also intended to provide some working capital to those firms deemed viable, but that part of the programme had not materialised.

While acknowledging the value of successful efforts to bring inflation under control, through controlled monetary policy and reduced government expenditures, business leaders, labour union officials and representatives of international assistance organizations all expressed the opinion that

²⁵ UNIDO, 1996.

tax policy had not yet succeeded in balancing state revenue needs with incentives to start and maintain small businesses. Business managers also exhibited a great deal of confusion about corporate taxes, import and export taxes, excise taxes, and a recently introduced value added tax. There was confusion over the base to be taxed, whether revenue or profits. There was dismay that corporate income tax was not graduated and was particularly burdensome to small and newly established businesses. And there was some anger that while they were required to give up providing social services to their employees and communities in order to improve profitability and attract foreign investors -- the tax revenue was not returning to their communities for utilities and transportation infrastructure, clinics and schools. While broad generalizations cannot be made, the stories told by managers of struggling to trade their products for inputs or consumption goods indicated that barter trade was motivated much more by difficulties finding buyers than as a strategy to avoid taxation.

The World Bank has also acknowledged that “the sustainability and the pace of reform will depend on how effectively the Government can establish a social safety net, including unemployment compensation, and benefits targeted at the truly needy.”²⁶ The trap of needing tax revenue to fund such services while reducing budget deficits has certainly delayed the process as the Bank foresaw. Directors at several plants visited in 1996 justified their use of extended leave and reduced work schedules as the best they could do to meet their responsibilities to their workers. Both managers and production workers considered arrangements to “share unemployment” by rotation as more equitable than retrenching some of the workers because all the employees maintained access to some medical benefits and added work months to their pension eligibility.

- C *Government investment in transportation and other infrastructure would both create jobs in the near term and leverage private and foreign investment for future job growth. Public investment in basic social services would create additional employment opportunities and remove one barrier to surplus workers being retrenched or leaving employers voluntarily. At this juncture, the priority of public policy must be to leverage the economy out of depression by increasing effective demand and promoting labour-intensive private domestic and international investment.*
- C *Infrastructure projects could also serve the additional important objective of bringing economic opportunities to remote regions where economic distress is greatest, by improving transportation connections to the Capital and to regional commercial centres.*
- C *Transparency, consistency and fairness of tax policies are as important to business managers as tax rates. Uncertainty in tax liability reduces managers’ willingness to commit resources to endeavours which if fruitful will be taxed at unknown rates. Reducing nominal tax rates while increasing efforts to collect taxes would probably increase state revenues by decreasing incentives to cheat. Although “flat” tax rates appear to be “fair” they are actually regressive, i.e. more burdensome to small, startup establishments and should be replaced with graduated tax rates.*
- C *A new consensus is needed as to what services should be purchased by individuals as consumers and provided by private businesses and what basic services should be made available to all, especially the vulnerable and unemployed. This should be a social consensus, and not a decision driven only by immediate exigencies to decrease government spending.*

²⁶World Bank, 1994, page iv.

6.3 Employment and labour market policies

Privatization schemes which transfer facilities to workers are often criticized out of concern that worker-shareholders would retard progress towards more effective management structures and avoid necessary cost-cutting and labour shedding. The results of the two Kyrgyz surveys of manufacturers document that enormous job destruction has taken place, but the rate of employment decline was similar in joint-stock and state-owned establishments. Even so, most establishments have retained redundant workers, at similar rates regardless of ownership form. The worry that joint-stock companies would not shed labour is not consistent with the facts, and within the small sample of interviews there were some encouraging signs that workers were making the hard decisions necessary to improve business viability. In one instance incompetent managers had been voted out and new managers hired by workers. In several enterprises workers had voted to invest in new equipment rather than distribute profits.

Policy issues beyond those of establishment ownership and governance, such as investment, credit institutions, small business promotion, and provision of social services discussed above, are now the preeminent concerns. In addition, however, three areas of labour market policy could also be instrumental in re-deploying displaced workers: improved labour information collection, more effective employment services, and employment training.

6.3.1 Labour market information

The establishment surveys yield essential information about the demand side of the labour market. The widespread problems across manufacturing sectors show that displaced workers were unlikely to find comparable jobs in other manufacturing sectors. However, the establishment surveys cannot tell us the duration of their subsequent unemployment nor the type and remuneration of their new jobs. An establishment survey alone, without this type of information, cannot document the growth of poverty resulting from job displacement.

Labour market surveys are also needed to provide accurate estimates of open and hidden unemployment. The official unemployment rate in the Kyrgyz Republic has hovered around 5 per cent. In effect, the official unemployment rate measures the portion of urban unemployed who have registered for unemployment benefits, which is far from an accurate count of persons available and willing to work but unable to find remunerative work. Thus it cannot be used as a base against which to measure employment changes because it does not capture the surplus labour (unemployed “hidden” within the enterprise) nor the majority of the openly unemployed.²⁷ Higher unemployment figures could indicate either improved data collection or improved benefit distribution, rather than an actual change in employment and unemployment rates.

²⁷ In fact, the extent of underemployment and surplus labour and the inability of the government to provide unemployment benefits lead us to expect that a rise in the official unemployment rate would indicate a turn around in the Kyrgyz economy, exactly the reverse of its interpretation in full market economies. As long as unemployment registration is neither a means of gaining subsistence support or learning about availability of new jobs, registration coverage will not improve and official unemployment rates will not reflect the number of persons needing and available for work. As unemployed workers see benefits being paid and job-search assistance provided they will have some incentive to register. Also, as basic social services are provided by communities or the national government, employees not actively working or paid will have less incentive to remain among the hidden unemployed. Thus “higher” rates could actually be “more accurate” rates.

- C *Labour or household surveys are needed to track displaced workers and to provide accurate estimates of unemployment and family poverty. Policy-makers tasked with devising social safety nets need such data to form realistic estimates of the costs of providing sufficient unemployment benefits to those in need, to plan training programmes and to formulate programmes targeting young and older workers.*

6.3.2 Employment services

Most managers explained continued labour hoarding as an effort to retain their most qualified and experienced workers, in hopes that market conditions would improve. However, many directors also expressed deep concern for the precarious position of discharged workers as well as those still working or on extended leave. For example, the government had been unable to pay even the meagre unemployment benefit, 75 soms a month (about \$7) to applicants outside Bishkek through most of 1996.

One of the market-enhancing institutions that remains under-developed in the Kyrgyz Republic is employment services. While the state no longer directly allocates labour among sectors and enterprises, it still has an important role to play in developing labour markets and helping them function effectively. Employment offices which collect vacancy postings from employers (and worker qualifications needed) and applications for work from unemployed and underemployed workers, help workers and employers find each other, thus reducing search costs and unemployment duration. According to the survey evidence, such employment services are not available or are used by relatively few establishments. For example, survey respondents were asked what would be their main recruitment method if they were to recruit production workers. Only 13 per cent of the managers said they would turn to the official employment service to fill open positions. However, these managers did routinely advise laid-off workers to register with the employment service.

- C *Increasing the amount and coverage of unemployment benefits should be a high priority. This is important first of all as a means to decrease the costs borne by individual families for changes that, eventually, are to benefit the entire economy. But it is also necessary in order to improve labour mobility.*
- C *Efforts to improve the role of employment centres as job information exchange could benefit both job-seekers and employers, by reducing search time and duration of unemployment.*

6.3.3 Human resource development

Least-skilled workers have been most likely to lose jobs and least likely to be re-employed. Although foreign investors are attracted by low wages, as well as high basic education levels, attracting investment in the long-term will require upgrading the skills of the least trained and re-training others in new machinery and technology.

Training is also needed in business management. Several managers interviewed had been working with foreign consultants to learn statistical process control and accounting, because they recognized that potential foreign investors would expect them to have these capabilities. None of the managers interviewed expressed desire to return to the command economy, but many said their enterprise could be very productive if only output markets could be “secure”. There is some lingering sentiment that attention to production with a given technology for set output orders is sufficient “management” and reluctance or lack of confidence to take on new activities in marketing,

distribution, and investment.

- C *Management training programmes could yield great benefits by preparing managers of medium-sized companies to attract foreign partners, as investors or customers, and to access credit. Because disrupted supply and market networks were consistently ranked as the most serious business problem, management training should particularly emphasize market information and development.*
- C *Self-employment promotion and small-business management training should target women. The same forces that have increased their vulnerability in the labour market may place them at disadvantage in competing for scarce startup-business credit.*
- C *Resources allocated to vocational training would have the highest return in terms of re-employment if they concentrated on upgrading skills of workers in unskilled or semi-qualified jobs.*

7. Conclusion

Many of the findings in this report will hardly surprise Kyrgyz employers and workers: that employment in manufacturing continues to fall and that the livelihoods of employed workers are also at risk due to the extensive use of various forms of leave time, decline in provision of social services, precarious employment terms and low wages. Manufacturers in rural areas and in southern Kyrgyz Republic have had the highest displacement rates. Women and younger workers have borne disproportionate shares of the job loss.

A principal purpose of this report, and of conducting the enterprise survey, was to measure the impact of changes in ownership structure or property form. Analysis of the survey findings concludes that changes in property form have not yet resulted in stemming the haemorrhage of job loss in Kyrgyz manufacturing. While the way in which privatization has been carried out may be open to criticism for failing to fully transfer decision-making responsibilities or transform incentive structures within establishments, no ownership restructuring alone would create sufficient conditions for surmounting the constraints imposed by disruption in input and output markets and the incomplete development of macroeconomic policy conducive to business growth.

Policy interventions in the economy are justified in market economies as enhancing market functions or making up for market failures. These concepts were given short shrift in the eagerness to change from a command-driven to a market-driven economic system, and the market-facilitating rather than market-substituting role of government was not well understood. Such roles include fostering fair competition, ensuring equitable access to credit, good management of trade relations and exchange rate policies, and providing sustenance for those too old, young or infirm to join the labour market. The constraints identified by business directors or managers point out that the most urgently needed public policies are trade promotion to facilitate re-building market networks, credit institutions targeting small and medium-businesses, management and entrepreneurship training, and tax and public expenditure policies that both encourage businesses to invest in modernising their facilities and technology and replace some of their responsibilities to provide basic social services.

The report analysing the findings from the first Kyrgyz Survey of Industrial Establishments concluded that the economy was in a state of “free-fall” in terms of the rate of job destruction. The follow-on survey could only document that this fall had not been broken. The continuation of the privatisation process had not yet managed to stem the job loss, much less led to output growth and job creation in any area of the economy. Hopefully progress made since this establishment survey was conducted in the policy spheres considered most crucial will have already begun to revitalise the economy.

8. Data Appendix

Appendix Table 1. Employment trends for young people and older workers

	Year	Youth Under age 25	Older workers Over age 50
Number employed	1992	37283	21663
	1995	18126	11012
Percentage change	1992-95	-51.4%	-49.2%
Per cent of total employment	1992	24.1%	14.0%
	1995	20.2%	12.6%
Average share of establishment employment	1992	20.9%	15.5%
	1995	15.2%	14.0%

KSIE I and II

Appendix Table 2. Redundant workers

		Per cent of establishments reporting having redundant workers*	Redundant workers as a percentage of total 1995 Employment **
Size	<100	35.5	9.4
	100-249	33.3	6.6
	250-999	36.8	10.4
	1000+	37.5	6.2
Region	Bishkek	25.2	5.6
	Chu Valley	45.2	10.0
	Osh/J.Abad	37.5	10.5
Industry	Food	43.1	7.0
	Textiles	22.6	4.8
	Non-metal minerals	31.3	6.3
	Fabricated metals	46.2	13.6
	Wood/Paper	35.0	10.5
	Other	26.6	9.2
All		35.3	8.0

*Establishments reporting they could produce same output with fewer workers.

**Total number of workers identified as redundant as a share of total employment, including employment in enterprises reporting no redundancies.

Source: KSIE II

Appendix Table 3. Extended leaves and reduced work schedules

		Reduced work schedules		Workers on extended leave	
		Percentage of Establishments that reduced work schedules	Workers on reduced schedules as a percentage of total 1995 Employment *	Percentage of establishments reporting workers on leave**	Workers on leave as a percentage of total 1995 Employment ***
Size	<100	30.3	1.1	75.0	33.5
	100-249	23.6	17.5	73.6	30.6
	250-999	27.9	16.1	91.2	43.2
	1000+	37.5	43.1	81.3	34.8
Region	Bishkek	27.6	49.1	77.0	35.2
	Chu Valley	13.7	5.9	76.7	27.0
	Osh/J.Abad	43.1	13.2	86.1	55.5
Industry	Food	25.0	34.3	79.2	35.8
	Textiles	24.5	17.1	83.0	49.4
	Non-metal minerals	24.2	13.0	69.7	27.2
	Fabricated metals	41.0	50.6	87.2	27.0
	Wood/Paper	40.0	24.9	70.0	27.6
	Other	13.3	4.5	86.7	46.8
All		28.0	28.8	79.7	37.4

*Total number of workers placed on shortened work schedules as a share of total employment, including employment in enterprises reporting no reduced work schedules.

**On leave with or without pay.

***Total number of workers on leave as a share of total employment, including employment in enterprises reporting no workers on leave.

Source: KSIE II

Appendix Table 4. Wage arrears

		Percentage of establishments unable to pay wages sometime in 1995	Percentage of establishments supplementing wages with in-kind payments
Size	< 100	67.1	60.5
	100-249	69.4	65.3
	250-999	70.6	70.6
	1000+	81.3	87.5
Region	Bishkek	67.8	55.2
	Chu Valley	64.4	61.6
	Osh/J. Abad	77.8	86.1
Industry	Food	54.2	61.1
	Textiles	69.8	75.5
	Non-metal minerals	75.8	51.5
	Fabricated metals	89.7	84.6
	Wood/Paper	70.0	45.0
	Other	80.0	80.0
All		69.8	66.8

Source: KSIE II

Appendix Table 5. Privatization summary

Year	Progress in privatization
1992	C State Property Fund, Gosimushchestvo, established
	C Sale begun of small-sized establishments and transfer of medium-sized establishments to labour collectives as closed joint-stock companies
1994	C Voucher privatization process begun, to include all citizens not just workers of specific enterprises
	C Small companies privatized through auctions for vouchers and cash
	C Medium and large enterprises first converted to joint-stock companies and then offered to private buyers through competitive bidding for up to 70 per cent of equity and through voucher auctions on a minimum of 25 per cent of shares, with the remaining 5 per cent distributed to workers
1995	C About 60 per cent of enterprises privatized or converted to joint-stock companies
	C Privatized enterprises account for 50 per cent of GDP in manufacturing
1996	C Some 66,000 non-state businesses registered, including 1,300 joint-stock companies

Source: Catherine Sokil, "Background summary of privatisation programmes in selected transition countries", unpublished document, ILO, 1997

Appendix Table 6. Bartered output

Percent of output bartered, group averages*		1993	1995
Size	< 100	9.6	19.8
	100-249	17.9	26.9
	250-999	23.1	35.3
	1000+	29.7	37.4
Region	Bishkek	15.5	24.4
	Chu Valley	18.7	26.5
	Osh/J.Abad	23.3	33.1
Industry	Food	16.3	19.3
	Textiles	23.4	38.4
	Non-metal minerals	10.1	26.9
	Fabricated metals	25.6	31.9
	Wood/Paper	20.1	25.3
	Other	13.2	25.7
	All	18.9	27.8

Source: KSIE I and II *Establishments not bartering any output were included in group averages

Appendix Table 7. Exports and imports, 1995

		Average share of output exported		Average share of inputs imported	
		CIS Countries	Non-CIS Countries	CIS Countries	Non-CIS Countries
Size	< 100	7.0	0.3	11.7	0.0
	100-249	10.5	0.1	19.5	1.8
	250-999	20.4	1.3	29.9	2.7
	1000+	37.4	1.7	48.6	0.8
Region	Bishkek	16.1	0.4	31.7	1.2
	Chu Valley	16.9	1.6	26.8	0.8
	Osh/J.Abad	15.0	0.5	12.3	2.7
Industry	Food	11.4	0.9	8.9	3.2
	Textiles	15.8	0.7	20.9	1.4
	Non-metal	12.6	0.5	28.8	1.7
	Fabricated	32.0	1.0	46.6	0.0
	Wood/Paper	6.2	0.1	32.5	0.2
	Other	10.9	0.0	20.6	0.0
All		16.0	0.7	24.3	1.5

Source: KSIE II

Appendix Table 8. Regression results: Per cent employment change, 1994-95

Independent variables		A. Joint-stock = set of joint stock establishments as of 1995		B. Joint-stock = subset of joint stock establishments, those privatized for at least 2 years	
		coefficient	t-statistic	coefficient	t-statistic
Constant		-6.67	(1.68)*	-6.90	(1.72)*
Region	Bishkek	-3.99	(1.56)	-3.18	(1.21)
Industry	Textiles	-4.47	(1.25)	-3.43	(.93)
	Heavy Industry	-2.16	(.73)	-2.48	(.67)
	Other Industry	4.19	(1.35)	5.43	(1.68)*
Size	Medium (100-499)	-5.49	(1.73)*	-6.02	(1.83)*
	Large (500 +)	-3.83	(.98)	-4.48	(1.10)
Percentage output exported		-.04	(.74)	-.01	(.05)
Percentage of work force unqualified		.02	(.32)	.04	(.59)
Manager selected by employees or enterprise board		1.29	(.48)	1.69	(.60)
Joint-stock	As of 1995	-.38	(.14)	x	
Joint-stock	As of 1993	x		-.86	(.32)
n		195		158	
F-value		1.73		1.58	
Signf. F		.08		.12	
Adjusted R2		.04		.04	
DF (Residual)		184		147	

Notes: * Significant at .10 level; ** Significant at .05 level; *** Significant at .01 level.
t-statistics in absolute values.

Dependent variable is percentage change in employment.

Heavy industry is comprised of chemical, metallurgy, and engineering industries. Other industry includes wood and paper, construction, and other industries. Omitted industry category is food.
Size= number of employees in 1994. Omitted size category is fewer than 100 employees.

Appendix Table 9. Regression results: Per cent labour redundant, 1995

Independent variables		A. Joint-stock = set of joint stock establishments as of 1995		B. Joint-stock = subset of joint stock establishments, those privatized for at least 2 years	
		coefficient	t-statistic	coefficient	t-statistic
Constant		11.28	(2.95)***	12.13	(2.80)***
Region	Bishkek	-6.63	(2.71)***	-7.99	(2.80)***
Industry#	Textiles	-2.21	(0.65)	-3.13	(0.79)
	Heavy Industry	.66	(0.19)	-.37	(0.09)
	Other Industry	-5.45	(1.86)*	-6.53	(1.89)*
Size	Medium (100-499)	2.95	(0.97)	2.25	(0.64)
	Large (500 +)	1.92	(0.50)	.54	(0.12)
Percentage output exported		-.02	(0.36)	.01	(0.05)
Percentage of work force unqualified		-.08	(1.05)	-.03	(0.40)
Manager selected by employees or enterprise board		1.81	(0.70)	2.10	(0.70)
Joint-stock	As of 1995	1.62	(0.64)	x	
Joint-stock	As of 1993	x		1.55	(0.54)
n		186		151	
F-value		1.57		1.48	
Signf. F		.12		.15	
Adjusted R2		.03		.03	
DF (Residual)		175		140	

Notes: * Significant at .10 level; ** Significant at .05 level; *** Significant at .01 level.
t-statistics in absolute value.

Dependent variable is percentage of employees considered redundant by establishment manager.

Heavy industry is comprised of chemical, metallurgy, and engineering industries. Other industry includes wood and paper, construction, and other industries. Omitted industry category is food.

Size= number of employees in 1994. Omitted size category is fewer than 100 employees.

Appendix Table 10. Social Service Facilities, by size of establishment, 1995

Facility	Employees per establishment (% with facility)			
	< 100	100-249	250-999	1000 +
Child care	1.3%	5.5%	33.8%	62.5%
Clinic	0.0%	18.1%	42.6%	75.0%
Cafeteria	5.2%	11.1%	26.5%	25.0%
Holiday resort	1.3%	1.4%	17.6%	68.8%
Housing	6.5%	22.2%	51.5%	87.5%
Worker transport	9.2%	27.8%	35.3%	68.7%
Farm plots	3.9%	22.2%	25.0%	50.0%
No. of Enterprises	76	72	68	16

Source: KSIE II

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