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**TITLE: Unemployment after Communism:  
Five Results from Ukraine**

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Unemployment After Communism:  
Five Results From Ukraine

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## Abstract

The general presumption among economists is that labor market adjustment in the former Soviet Union will be slow: state enterprises will hoard labor, new private sector jobs will be created slowly, and the prospects for people fired from state jobs will be bleak. This paper provides five results from a survey of 349 people who were fired from state enterprises in Ukraine up to December 1992 which suggest the real situation is more complicated.

First, the average rate of employment reduction in state enterprises has been quite high -- 13 percent of total employment in our small sample -- but the pattern of reductions remains uneven. Some enterprises have already cut a third or more of their workforce, while others have eliminated almost no jobs.

Second, younger people are more likely to be fired from state enterprises. In our sample, 49 percent were aged under 30 and 65 percent were under 35 years old. Only 26 percent were 41 or older and only 3 percent were over the age of 50. However, it does appear that a significant number of people already of pensionable age -- 55 and older for women and 60 and older for men -- have been forced to retire. Women are about as likely as men to be fired.

Third, there are surprisingly high average rates of reemployment for people fired from state enterprises. Of our sample, 42 percent say they have found work in the nonstate sector and 31 percent say they have found a new job in the state sector. Only 27 percent describe themselves as unemployed.

Fourth, among people who were fired, the pattern of unemployment is uneven. Among people who were fired, the lowest rates of unemployment are for young men with only secondary school education. Rates of unemployment increase sharply for people over the age of 35 and are significantly higher for women than for men. Unemployment rates are also somewhat higher for young people who finished higher education but who are under 30 years of age.

Fifth, in our sample, every unemployed person lived in a family where at least one other person worked. Presumably this helps cushion the effect on living standards of fired people. However, in the cases of 75 percent of the unemployed people, only one other family member was currently working. Given the likelihood of further job losses in the state sector and the difficulties which women and older people have already shown with moving into the nonstate sector, this suggests the living standards of unemployed people are likely to fall further in the near future.

## 1. Introduction

It has become painfully obvious that the transformation of post-communist economies involves a far-reaching change in the structure of employment. The evidence so far -- based mostly on experience in Eastern Europe -- indicates a pattern of job destruction in the state sector and job creation in the private sector. Many, although not all, new jobs in the private sector provide higher incomes and better opportunities than the old jobs in the state sector. In large part, therefore, the costs of economic transformation depend on the relative speeds with which old jobs disappear and new jobs appear, and on the ability of different kinds of people to move between these jobs.

Given this experience in Eastern Europe, what will be the likely behavior of employment and unemployment in the former Soviet Union? The presumption among economists has been that the formerly inactive and rigid structure of this economy will make labor market adjustment slow and painful. In particular it is assumed that state enterprises will hoard labor at least initially while output falls, that new private sector jobs will be created more slowly than state sector jobs disappear, and that the prospects for people fired from state jobs will be bleak. To the extent that people move into the private sector, this will be because they voluntarily quit their state sector jobs.

However, this view is based primarily on theoretical reasoning. Are there really special features in the former Soviet Union which will make its labor market adjustment especially difficult, and perhaps even more problematic than in Eastern Europe? In order to answer this, empirical research needs to address at least five sets of questions.

First, how fast are jobs being lost in the state sector? Based on East European

experience -- particularly the case of Poland -- there is a presumption that state enterprises are generally reluctant to fire people. Is this theory valid for the former Soviet Union?

Second, precisely who is fired from state enterprises? How does the probability of being fired depend on age, education level and gender? What is the composition of employment reductions between firings, retirements and voluntary quits?

Third, what happens to people who are fired from the state sector? To what extent are people fired from state employment able to find new jobs, either in the private or state sectors? What personal characteristics affect the likelihood they will find work in the nonstate sector?

Fourth, given that someone has been fired, how does the probability of unemployment depend on that person's age, education level and gender?

Fifth, how do people survive when they become unemployed, given that the real value of available social benefits is very low? In particular, to what extent is the effect of unemployment cushioned by the fact that other people who live in the same apartment are still working?<sup>1</sup>

Motivated by these issues, in December 1992 we investigated the pattern of job losses and the experiences of people who were fired in a cross-section of thirteen medium-sized and large industrial enterprises in Kiev, capital of Ukraine. From each enterprise we obtained information about the pattern of employment reduction during 1992 and also a list of employees who were fired. We then interviewed the employees and asked questions about themselves and their current employment status. As a result, this paper can provide at least preliminary answers to all five of the above sets of questions.

First, it appears not to be true in general that state enterprises in Kiev are uniformly hoarding labor. Although significant job losses appear to have begun only in mid-1992, our sample shows a total employment decrease of 13 percent during 1992. Furthermore, in slightly more than half of our sample -- six enterprises -- employment fell by more than 20 percent, and in five cases it fell more than 30 percent.

Second, to some extent there appears to have been an attempt to limit the number of people fired by forcing older people into retirement. However, it was still the case that 61 percent of the total involuntary reduction in employment in our sample was accounted for by people who were simply fired. A large proportion of the people who are fired are younger - - 65 percent are under 36 years old. Men and women are equally likely to be fired.

Third, in our sample, 73 percent -- a surprisingly high proportion -- say they have found another job. Of this total, more than half are working in what they identify as the nonstate sector.<sup>2</sup> However, young males are by far the most likely to have found nonstate jobs. Fired people with only a secondary education are also more likely to now work in the nonstate sector than fired people with a higher education.

Fourth, conditional upon having been fired, unemployment rates are much higher for older people -- with 35 years of age as a critical break point -- for women and to some extent also for people with higher education.

Fifth, we found only two cases in which an unemployed person lived in a family in which no one worked. However, for 75 percent of the unemployed, only one family member was currently employed.

Our general finding is therefore that there has already been a substantial amount of

adjustment in the labor market in Kiev, both in terms of people losing jobs and finding new jobs. The caveat is that only young men, particularly those with secondary education, seem to move easily from the state sector to the private sector. The presumption of slow and painful labor market adjustment seems correct for older workers, for women and to some extent for people with higher education. However, this adjustment process may be no slower than in much of Eastern Europe.

The remainder of this paper has four sections. Section 2 describes in detail the characteristics of our sample of firms and how these are related to the population of industrial firms in Kiev. Section 3 presents data on the pattern of employment reduction across firms. Section 4 examines what happened to people who were fired. Section 5 concludes by summarizing both the good and bad news from our survey. An appendix explains how our interviews were conducted.

## 2. Sample Characteristics

Table 1 shows the main characteristics of the sample of firms. We constructed the sample so it would contain three types of firms: those producing only military goods, those producing both military and civilian goods and those producing only civilian goods.<sup>3</sup> The primary goal of choosing firms in this way was to ensure that we included firms in a variety of product markets -- Table A1 in the appendix provides some details about what these firms produce.

This sample construction also implied that we would obtain a range of firm sizes, in terms of employment, because military firms tend to be much larger than civilian firms. In



Table 1

Enterprise I.D.Number	Jurisdiction	Type of Enterprise	Employment in December 1991
1	Moscow	Military	10,117
2	Kiev	Civilian	900
3	Kiev	Civilian	611
4	Kiev	Civilian	650
5	Moscow	Military/ Civilian	7,080
6	Moscow	Military	6,560
7	Moscow	Military	20,700
8	Moscow	Civilian	714
9	Kiev	Military/ Civilian	1,531
10	Moscow	Military	12,350
11	Moscow	Civilian	2,460
12	Moscow	Civilian	560
13	Kiev	Civilian	<u>820</u>
Total			65,053

"Jurisdiction" indicates whether the firm was under all-Union (Moscow) or republican (Kiev) control in mid-1991.

December 1991, the four pure military firms in our sample had average employment of 12,432, the two military/civilian firms had average employment of 4,306 and the seven civilian firms had average employment of 959. The combined average employment was 5,004.

One important question is obviously to what extent these enterprises are representative of the industrial sector as a whole in Kiev, in Ukraine and in the former Soviet Union. We have obtained a list of 197 "civilian" industrial firms in Kiev and in mid-1991 -- before there was any significant employment reduction -- these had average employment of 1,068.<sup>4</sup> This suggests our civilian firms are fairly representative for Kiev, at least in terms of size. We do not yet have comprehensive data which would allow us to determine exactly how the size distribution of firms in Kiev relates to the rest of Ukraine and the former Soviet Union. Our sense is that Kiev is fairly typical of larger cities, but not easily comparable with smaller towns which are dominated by a few employers.<sup>5</sup>

It is harder to be sure whether the pure military firms are representative, because it is not possible to obtain a comprehensive list of firms which produce primarily for the military. However, some indirect evidence is available.

Total industrial employment in Kiev in mid-1992 -- before the emergence of significant unemployment -- was around 700,000.<sup>6</sup> Civilian enterprises on our list of 197 employed in 1991 about 200,000 people and we estimate that a further 100,000 people worked in small civilian industrial enterprises which are not included in this list. These numbers suggest that the military goods sector -- including firms designated as military and military/civilian in our sample -- employed about 400,000 people.<sup>7</sup>

Total employment in our sample of enterprises was 65,053 in December 1991, which was therefore about 9 percent of total industrial employment in Kiev. Our six military and military/civilian enterprises had total employment of 58,338, which was probably in the range of 10-15 percent of total employment in the military production sector. In contrast, our seven civilian enterprises, with combined employment of 6,715, account for only 3 percent of total employment in all civilian enterprises with employment greater than 250 people and probably account for no more than 2 percent of total employment in civilian industry.

From each firm we obtained statistics about their total employment reduction, including the reason why different people had left the firm. We also obtained from each a list of 40 people who had been fired during 1992.<sup>8</sup> We then contacted these people to ascertain their current employment status and to ask them a number of other questions.

Table A2 in the appendix shows both the number of people fired and the number of respondents we obtained for each firm. The total number of people contacted was 491, of whom we were able to interview 349.

### 3. Employment Reductions

The first set of questions posed in the introduction concern how much employment has fallen. The presumption based on East European experience is that Ukrainian firms would be slow to cut workers. Our work with this sample suggests this presumption is not correct.<sup>9</sup>

Table 2 shows the total change in employment in our sample. Total employment in

Table 2

Enterprise i.d.Number	<u>Employment Levels</u>			Total Change Employ.	Percent Change
	December 1991	January 1992	November 1992		
1 M	10,117	10,103	10,017	-100	-1%
2 C	900	877	790	-110	-12%
3 C	611	603	380	-231	-38%
4 C	650	620	390	-260	-40%
5 M/C	7,080	7,054	6,150	-930	-13%
6 M	6,560	6,530	6,500	-60	-1%
7 M	20,700	20,600	17,700	-3,000	-14%
8 C	714	700	455	-259	-36%
9 M/C	1,531	1,500	1,162	-369	-24%
10 M	12,350	12,511	10,000	-2,350	-19%
11 C	2,460	2,422	2,090	-370	-15%
12 C	560	529	252	-308	-55%
13 C	<u>820</u>	<u>820</u>	<u>560</u>	<u>-260</u>	<u>-32%</u>
Total	65,053	64,869	56,446	8,607	-13%

## Notes:

1) Enterprise #13 was unable to provide us with numbers for December 1991, so we have assumed employment in December 1991 was the same as in January 1992.

2) "Total change Employ." is total change in employment and is calculated as:  
(November 1992-December 1991)/(December 1991).

3) The letter in the column for enterprise i.d. number indicates whether the enterprise is civilian ("C"), military ("M") or military/civilian ("M/C").

all 13 firms was 65,053 in December 1991, 64,869 in January 1992 and 56,446 in November 1992. The total reduction in employment in our sample was 13 percent.<sup>10</sup>

Due to the size distribution of firms in our sample, 73 percent of the employment reduction -- 6,280 of 8,607 jobs lost -- was in three enterprises: #5, #7 and #10, two of which are military and one of which is military/civilian. (In Tables 2, 4 and A1, in the column for "enterprise I.D. number," military firms are identified by M, military/civilian firms are identified by M/C and civilian firms are identified by C.) However, the percentage reduction in employment in almost all military and military/civilian enterprises was less than in almost all civilian enterprises. The employment reduction in civilian firms has been across the board: -12%, -38%, -40%, -36%, -15%, -55%, and -32%. In contrast, two military enterprises had only a one percent reduction in employment, while the other two military enterprises had reductions of 19 percent and 14 percent, and the two military/civilian enterprises had reductions of 13 percent and 24 percent. The employment reduction was greater than 20 percent in five civilian enterprises -- the exceptions were #2 with only a 12 percent fall and #11 with a 15 percent fall.

Table 3 further shows the different average employment reductions between the three types of enterprises. Employment fell only 11 percent in pure military enterprises, while dropping 15 percent in mixed military/civilian enterprises.<sup>11</sup> The striking contrast is with civilian enterprises which show a total employment reduction of 27 percent in Table 3.

Table 4 provides further details on the composition of employment reduction between its two main components: firings and retirements. Of the two, firings are obviously an involuntary reduction in employment, but anecdotal evidence suggests a large fraction of

Table 3

Type of Enterprise	Employment Dec. 1991	Change in Employment	Percent Change
Military	49,727	5,510	11%
Mixed (Military/Civilian)	8,611	1,299	15%
Civilian	6,715	1,798	27%

Notes:

- 1) The type of enterprise is as defined in Table 1 above. In our sample there are 4 military enterprises, 2 mixed enterprises (military and civilian production), and 7 civilian enterprises.
- 2) The figures for civilian enterprises assume that employment in enterprise #13 was the same in December 1991 as in January 1992.
- 3) "Change in Employment" is calculated as:  
(November 1992 employment - December 1991 employment)
- 4) "Percent Change" is calculated as:  
Change in Employment/December 1991 employment

Table 4

Ent. #	Total Reduction in 1992	Number Fired	Fired as % of Dec.91	Ret. +Inv.	Total Invol. Reduc.	Total %	Fired/ Invol.
1 M	86	30	0.3%	20	50	0.5%	60%
2 C	87	49	5%	38	87	10%	56%
3 C	223	146	24%	77	223	36%	65%
4 C	218	138	21%	80	218	34%	63%
5 M/C	1051	241	3%	516	757	11%	32%
6 M	30	21	0.3%	8	29	0.4%	72%
7 M	2,900	2,326	11%	574	2,900	14%	80%
8 C	245	167	23%	78	245	34%	68%
9 M/C	338	230	15%	108	338	22%	68%
10 M	2,511	400	3%	1000	1,400	11%	29%
11 C	336	245	10%	91	336	14%	73%
12 C	287	202	36%	85	287	51%	70%
13 C	<u>260</u>	<u>69</u>	<u>8%</u>	<u>107</u>	<u>176</u>	<u>21%</u>	<u>39%</u>
Total	8,572	4,264	7%	2,782	7,046	11%	61%

Variables in this table are defined on the next page.

Definition of Variables in Table 4:

- 1) "Total Reduction in 1992" is the total reduction of employment during 1992. This does not match in some cases with Table 2, because firms reported numbers to mid-December. Unfortunately, the question we asked did not result in consistent information about the number of people who left the firms of their own free will. However, we do know that "about 1,000" left firm 10 for this reason and that 84 left firm 13 voluntarily. However, in our opinion these numbers are unusually high.
- 2) "Number Fired" is the number of people who were dismissed.
- 3) "Fired as % of Dec. 91" expresses the number of people dismissed as a percentage of total employment in that firm in December 1991.
- 4) "Ret. + Inv." is Retirees plus Invalids -- the sum of retirees and people who retired on a disability pension.
- 5) "Total Invol. Reduc." is the Total Involuntary Reduction in employment -- the sum of "Retirees + Invalids" plus "Number Fired."
- 6) "Total %" is "Total Involuntary Reduction" divided by employment in December 92.
- 7) "Fired/Invol." is "Number Fired" expressed as a percentage of "Total Involuntary Reduction."

(The number of voluntary quits can be calculated as the total reduction minus involuntary reduction. This number is zero for all enterprises with the exception of enterprise #1, with 36 quits, #5, with 294 quits, #6 with 1 quit, #10 with 1,111 quits and #13 with 84 quits.)

The difference between number fired plus retired/invalid and the total reduction is due to several elements: death, call-up to the army, voluntary quits.



retirements may also be considered involuntary.<sup>12</sup>

The number of people fired as a percent of total involuntary job losses ranges between 29 percent and 80 percent, with an average of 61 percent. One of the two military enterprises which had a significant employment reduction (#10) reported that only 29 percent of its involuntary reduction was accounted for by people who had been fired. Similarly, one of the two military/civilian enterprises (#5) showed an unusually low ratio of fired people to total involuntary reduction -- only 32 percent.

Interestingly, there were relatively few voluntary quits from enterprises in our sample. The total number of voluntary quits can be calculated from Table 4 as the total reduction in 1992 minus the total involuntary reduction -- which gives 1,526, or 18 percent of the total employment reduction of 8,572. However, of this amount, 1,111 people (73 percent) were accounted for by one enterprise (#10). For the other 12 enterprises, total voluntary quits was 415, which was only 0.2 percent of the total employment reduction of these enterprises (6,061) and of which 71 percent was accounted for by one enterprise (#5).<sup>13</sup>

In summary, Tables 2, 3 and 4 show that the employment reduction in civilian firms has three main characteristics. First, it is large -- Table 3 shows an average employment reduction of 27 percent. Second, the employment reduction is fairly evenly distributed across enterprises. Third, the share of fired people in the total involuntary reduction is high -- Table 5 shows this share to be 65 percent for the seven civilian enterprises in our sample.

In contrast, on the first point, Table 3 shows military enterprises have a much lower average rate of employment reduction -- 11 percent for pure military enterprises and 12 percent for military and military/civilian combined. Second, there was a very uneven

distribution of employment reduction across military and military/civilian enterprises. In two enterprises (#1 and #6) hardly anyone was fired and in two other enterprises (#10 and #5) the number of people fired was less than 5 percent. On the other hand, in two enterprises (#7 and #9) the employment reduction was more in line with the reductions in civilian enterprises.

Military and military/civilian enterprises resembled civilian enterprises more closely on the third point. Table 5 shows the average share of fired people in total involuntary employment reduction at military enterprises to be 63 percent, which is very close to the number for civilian enterprises. However, there were two outliers among the pure military enterprises -- the share of fired people in total involuntary reduction was 80 percent in enterprise #7 and only 29 percent in enterprise #10. Furthermore, the other two pure military enterprises have had less than a one percent involuntary employment reduction, so this aspect of their performance is not fully comparable.

In conclusion, at least in this sample of industrial enterprises in Kiev, there has been a significant reduction of overall employment. However, the pattern is uneven, with a much larger reduction in civilian rather than military enterprises. Enterprises producing both military and civilian goods appear to be an intermediate case.

What explains this result, particularly given that military enterprises are likely to have suffered a larger fall in output than have civilian enterprises?<sup>14</sup> One possible reason is that enterprises still producing military goods receive enough subsidies to protect their workers either by minimizing the amount of involuntary employment reduction or by skewing this reduction towards forcing people into retirement. However, further research is needed to

Table 5

Type of Enterprise	Employment in Dec.91	Total Invol.	Total Fired	Fired/Invol.
Military	49,727	4,379 (9%)	2,777 (6%)	63%
Military/ Civilian	8,611	1,095 (13%)	471 (5%)	43%
Civilian	6,715	1,572 (23%)	1,016 (15%)	65%

(.) brackets express the number they are below as a percentage of the row total.

Definition of variables

- 1) "Total Invol." is total involuntary employment reduction, from Table 4.
- 2) "Total Fired" is total number of people fired, from Table 4.
- 3) "Fired/Invol." is total number of people fired expressed as a percentage of total involuntary employment reduction.

directly address this point.

The most important conclusion is that Ukrainian industrial enterprises do not appear to be hoarding labor and refusing to reduce employment. Given this finding, it becomes even more important to understand who is fired and what happens to them after being fired.

#### 4. Job Losers

Our main interest is in understanding how the probability of being fired, the chance of becoming unemployed and the likelihood of being reemployed in the nonstate sector vary with people's personal characteristics. In turn we consider these issues from the perspective of age, education and gender.

Table 6 shows that a high percentage of job losers are young -- 49 percent of the job losers are aged 30 or under and 74 percent are aged 40 or under. There are almost no people in our sample over 50 years of age, which is particularly interesting given that the retirement age is 60 for men and 55 for women. One strong implication from our survey is that very few people over the age of 40 have been fired in Kiev, although the previous section showed that a significant number of people retired in 1992.

However, younger job losers are less likely to end up as unemployed. Only 18 percent of the 20-25 age group became unemployed, 9 percent of the 31-35 age group, 16 percent of the 36-40 age group. In contrast, 34 percent of the 41-50 age group became unemployed and more than 80 percent of the over 50 age group were without a job. The exception to this pattern is the 26-30 group, in which 37 percent were unemployed -- this finding is discussed further in connection with Table 9 below.<sup>15</sup>

Table 6

Age (years)	Total Number	<u>Current Employment Status</u>			Own Business	Bus. Plan
		State	Nonstate	Unemp.		
20-25	81 [23%]	15 (19%)	52 (64%)	14 (18%)	30 (38%)	18 (23%)
26-30	92 [26%]	15 (16%)	43 (46%)	34 (37%)	26 (28%)	21 (23%)
31-35	55 [16%]	17 (31%)	33 (60%)	5 (9%)	21 (38%)	15 (27%)
36-40	32 [9%]	16 (50%)	11 (34%)	5 (16%)	7 (22%)	4 (13%)
41-50	79 [23%]	43 (54%)	9 (11%)	27 (34%)	6 (8%)	6 (8%)
> 50	10 [3%]	2 (20%)	0 (0%)	8 (80%)	0 (0%)	2 (20%)
Total	349 [100%]	108 [31%]	148 [42%]	93 [27%]	90 [26%]	66 [19%]

(.) brackets express numbers as a percent of total in that age group.

[.] brackets express numbers as percent of the total sample (i.e., 349)

Notes:

- 1) Everyone is classified as either "state" for current employment in the state sector, "nonstate" for current employment in the nonstate sector, or "unemp." for currently unemployed.
- 2) People with business plans may have any current employment, including being currently self-employed.

There are also major differences between age groups in terms of where they are now working. Younger people are both more likely to find a job and more likely to work in the nonstate sector. Table 7 shows that of those finding work, 78 percent of the 20-25 age group, 74 percent of the 26-30 age group, and 66 percent 31-35 age group found work in the nonstate sector. In contrast, of those finding work, 41 percent of the 36-40 age group, 17 percent of the 41-50 age group, and no one older than 50 found work in the nonstate sector.

Table 6 also shows that a much higher percentage of younger people either have their own business or plan to establish a business. Of the people aged 35 and under, 34 percent (77 out of 228) already have their own business. For people aged 36 and older, the figure is only 11 percent (13 out of 121). The same comparison also holds for those with plans for a new business. Of those aged 35 and under, 24 percent (54 out of 228) have a plan, while of those aged 36 and older, only 10 percent (12 out of 121) have a plan.<sup>16</sup>

The extreme right-hand column of Table 7 further shows the proportion of people who work in nonstate business but who do not have their own business. This may indicate people who work in more substantial nonstate businesses -- we know these people are not self-employed. These numbers show a very similar pattern to nonstate employment more generally. The proportion of people aged from 20 to 35 working for someone else in the nonstate sector varies from 22 percent to 27 percent, while after 35 years of age this proportion drops off sharply.

Table 8 presents estimates of unemployment rates for different age groups in our sample -- keeping in mind that these are only for people who were fired from their jobs in 1992. The lower bound of unemployment is given by the number of people who say they

Table 7

Age (years)	Total Number Reemployed	<u>Sector of Employment</u>		Nonstate - own bus.
		State	Nonstate	
20-25	67 [26%]	15 (22%)	52 (78%)	22 (27%)
26-30	58 [23%]	15 (26%)	43 (74%)	17 (17%)
31-35	50 [20%]	17 (34%)	33 (66%)	12 (22%)
36-40	27 [11%]	16 (59%)	11 (41%)	4 (13%)
41-50	52 [20%]	43 (83%)	9 (17%)	3 (4%)
> 50	2 [1%]	2 (100%)	0 (0%)	0 (0%)
Total	256 [100%]	108 [31%]	148 [42%]	58 (17%)

[.] brackets express the number they are below as a percentage of the total number of people who are working (i.e., 256).

(.) brackets express the number they are below as a percentage of the row total.

Notes:

1) "Nonstate - own bus." is the number of people who work in nonstate business minus the number who have their own business, which gives the number of people working for someone else in the nonstate sector.

Table 8

Age (years)	Total Number	<u>Current Employment</u>		<u>Unemployment Rates</u>	
		State + Unemp.	Nonstate	Lower Bound	Upper Bound
20-25	80 [23%]	29 (36%)	51 (63%)	18%	36%
26-30	93 [27%]	50 (54%)	43 (46%)	38%	54%
31-35	55 [16%]	22 (40%)	33 (60%)	9%	40%
36-40	32 [9%]	21 (66%)	11 (34%)	16%	66%
41-50	79 [23%]	70 (89%)	9 (11%)	34%	89%
> 50	10 [3%]	10 (100%)	0 (0%)	80%	100%
<b>Total</b>	<b>349</b> [100%]	<b>202</b> [58%]	<b>147</b> [42%]	<b>93</b> [27%]	<b>202</b> [58%]

## Notes:

- 1) Lower bound unemployment rates are the percentage of this group who say they are unemployed.
- 2) Upper bound unemployment rates are the sum of people who say they are unemployed and people who say they work in the state sector.



are currently unemployed. The upper bound estimate of unemployment rates assumes that all new jobs in the state sector are actually disguised unemployment.<sup>17</sup> The significant differences in relative unemployment rates between lower and upper bounds are in the 31-40 age groups, which seem to find state employment more often than younger people.

The conclusion is that reemployment rates are higher for younger people, and the key break point appears to be at 35 years of age -- with the important caveat that a relatively high percentage of people aged 31-35 find work in the state sector.

Similarly, the share of people aged 26-30 who are not reemployed is higher than the age groups both older and younger, which suggests there may be a particular problem for relatively young people who have just finished higher education. We turn now to examine how firings, reemployment patterns and unemployment depend on education level.

Table A3 in the appendix shows the age-education composition of our sample. Of the age group 20-25, 91 percent of our sample has only a secondary school education. This is not surprising given that the average age at completion of university or other higher education is about 23 in Ukraine.

In both the age groups 26-30 and 31-35, precisely 71 percent of our sample have higher education. However, this percentage falls for subsequent groups: 34 percent of the 36-40 age group have higher education, 59 percent of the 41-50 age group have higher education, and 30 percent of people over the age of 50 have higher education.<sup>18</sup>

Table 9 shows the main results of our sample broken down by education level. Our results indicate a very similar percent of people with higher and secondary education find work in the state sector: 32 percent and 29 percent respectively. The difference seems to lie

Table 9

Educ. Level	Total	Current Employment Status			Same Sphere	Same Spec.
		State Sector	Nonstate	Unemp.		
Higher	171 [49%]	56 (32%)	64 (38%)	52 (30%)	27 (16%)	91 (53%)
Second. School	178 [51%]	52 (29%)	84 (48%)	41 (23%)	29 (16%)	48 (27%)
Total	349 [100%]	108 [30%]	148 [42%]	93 [27%]	56 [16%]	139 [40%]

(.) brackets are percent of row total

[.] brackets are percent of total sample (i.e., 349).

Table 10

Current Employment Status	Total Plans	<u>Type of Business Plan</u>			
		Produce	Trade	Interm.	Other
State	4 [6%]	1 (25%)	1 (25%)	1 (25%)	1 (25%)
Nonstate	53 [77%]	22 (42%)	12 (23%)	10 (19%)	9 (17%)
Unemp.	12 [17%]	1 (8%)	7 (58%)	0 (0%)	4 (33%)
Total	69 [100%]	24 [35%]	20 [29%]	11 [16%]	14 [20%]

(.) brackets are as a percentage of row total.

[.] brackets are as a percentage of the total number of people with plans to start a new business (i.e., 69)

in the fact that a higher proportion of people with secondary education find work in the nonstate sector (48 percent versus 38 percent) and a lower proportion are unemployed (23 percent versus 30 percent). The new jobs in the nonstate sector seem more suited to workers with only secondary school education.

Table 9 further shows the new jobs are usually not in the same branch of industry -- only 16 percent of both people with higher and secondary education report they now work in the same "sphere" -- meaning the same branch of industry. Anecdotal evidence suggests that many new nonstate jobs are in trading activities.

However, not all nonstate employment is as self-employed traders. Evidence in this regard is from the right-hand column of Table 9, which shows that of people with higher education, 53 percent report they now work in the same specialty -- meaning the same professional activity -- as before. This number is surprisingly high, and may indicate that the new nonstate sector is effectively using some of the available highly educated workers.

Table 10 shows the link between plans to establish new business and the current employment status of respondents. Almost no one who works in the state sector has any plans to start their own business and the same is largely true of the unemployed -- although 7 unemployed people did say they wanted to start a trading business. In contrast, a relatively high proportion of people working in the non-state sector want to start their own business, of which a surprisingly large percentage (42 percent) want to start production.<sup>19</sup>

Table 11 presents some of our most striking results -- the differences in current employment status between men and women who were fired. Of our sample about half was men and half was women, which suggests that men and women are equally likely to be fired

Table 11

Gender	Total	State	<u>Current Employment Status</u>		Own Business
			Non-state	Unemp.	
Female	148 [53%]	57 (39%)	33 (22%)	58 (39%)	15 (10%)
Male	131 [47%]	34 (26%)	81 (62%)	16 (12%)	45 (34%)
Total	279 [100%]	91 (33%)	114 (41%)	74 (27%)	60 (22%)

[.] brackets express the number they are below as a percentage of the sample for which relevant data is available (i.e., 279).

(.) brackets express the number they are below as a percentage of the row total.

**Notes:**

Data on the gender of respondents is available for all enterprises with the exception of numbers 2, 11 and 12. This gives a total sub-sample size of 279.

from state enterprises. However, 39 percent of women say they are unemployed, while only 22 percent of women work in the nonstate sector and a mere 10 percent say they have their own business.<sup>20</sup> In contrast, only 12 percent of men are unemployed, 62 percent work in the state sector and 34 percent have their own business.

Table 12 shows a measure which is relevant for the current living standards of the unemployed. In the subsample for which we know respondents' gender, this table shows that in every case an unemployed person lived in a family where at least one other person was still working. Out of our whole sample of 349, of whom 93 are unemployed, only two reported that no one in their family is currently working. However, for 75 percent of the unemployed people in our sample, there is only one other person currently working in their family. These families are most at risk from further job losses.<sup>21</sup>

We should also mention one further relevant hypothesis, which is that given the uneven pattern of employment reduction across types of firms, the characteristics of people fired may differ according to the type of enterprise in which they worked before. In fact, we find no evidence to support such a view. For example, Table 13 breaks down the job losers according to whether they previously worked in military, military/civilian or civilian enterprises. From all three types of enterprise, the job losers appear equally likely to become unemployed -- the shares are 27 percent, 27 percent and 26 percent. However, people who worked in civilian enterprises previously do seem slightly more likely to have secured jobs in the nonstate sector.

In summary, it appears that younger people are both more likely to be fired and more able to find some form of reemployment. Older people are more likely to be unemployed,

Table 12

Gender	Unemployed People	<u>Number Currently Working in Family</u>			
		0	1	2	3
Male	18 [23%]	0 (0%)	14 (78%)	2 (11%)	0 (0%)
Female	59 [77%]	0 (0%)	44 (75%)	14 (24%)	1 (2%)
Total	77 [100%]	0 [0%]	58 [75%]	16 [21%]	1 [1%]

[.] brackets express the number they are below as a percentage of the sample for which relevant data is available (i.e., 279).

(.) brackets express the number they are below as a percentage of the row total.

Table 13

Type of Enterprise	Total	<u>Current Employment Status</u>		
		State Sector	Nonstate Sector	Unemp.
Military	124 [36%]	44 (35%)	47 (38%)	33 (27%)
Military/ Civilian	55 [16%]	17 (31%)	23 (42%)	15 (27%)
Civilian	170 [49%]	47 (28%)	78 (46%)	45 (26%)
Total	349 [100%]	108 (31%)	148 (42%)	93 (27%)

[.] brackets express the number they are below as a percentage of the total sample size (i.e., 349).

(.) brackets express the number they are below as a percentage of the row total.



less likely to work in the nonstate sector and less likely to start their own business. Older people are also less likely to be fired. However, women appear as likely as men to be fired, and much less likely to find a new job -- particularly a new job in the nonstate sector.

## 5. Conclusion

There is good and bad news from our survey of people who have been fired from state jobs in Kiev. The good news is that the rates of reemployment are surprisingly high, particularly for young men with only secondary school education. This group is also among the most likely to be fired from state enterprises. Although we do not have wage or other corroborating data, it is possible that many of these people move voluntarily into the nonstate sector and are fired from their state jobs after they have already effectively quit. In the most optimistic interpretation, the firing and reemployment of young men could be considered a reasonable part of the movement of jobs from the state sector to the private sector.

The bad news is partly that even if only 27 percent of people who are fired remain unemployed, the likely scale of job losses will generate large scale unemployment. Furthermore, the burden of unemployment so far has fallen quite unequally. Conditional on being fired, older people are less likely to be reemployed or if they are reemployed, their new job is more likely to be in the state sector. Anecdotal evidence suggests we should be skeptical about whether those new state jobs will prove lasting. Furthermore, the extent of retirements in 1992 -- and further anecdotal evidence -- suggests that this is the most important form of involuntary loss of employment for older people.

Conditional on being fired, unemployment rates are also somewhat higher for people

who have finished higher education -- although if these people find further work, more than half of them work in their professional capacity. We would interpret this as mixed news.

The worst news is for women. Although equally likely to be fired as men, the evidence in our sample suggests women are much less likely to find another job. Furthermore, if they do find another job, this is more likely to be in the state sector. At least in our sample, women are also much less likely than men to start their own business.

The final piece of news itself has both good and bad elements. It is perhaps heartening that only two of the unemployed in our sample live in a family unit where no one is currently working. On the other hand, 75 percent of the unemployed in our sample live in families where now only one person is working. Given the likelihood of further job losses, this result is cause for serious concern.

Overall, our results show a pattern of job losses and behavior of fired people which is at least as substantial as has been seen in Eastern Europe and which in some regards seems closer to developed market economies. Firms are firing workers. For people over the age of 40, it is very difficult to find another job after being fired. Once fired, women may be more likely to withdraw from the labor force. A major difference from Western Europe is that younger workers are better able to find new jobs in Ukraine. In summary, our work so far indicates that labor market adjustment is beginning in Ukraine and -- at least along the dimensions considered here -- there are no grounds for considering adjustment to be slower or less complete than in Eastern Europe.

All our results should be interpreted with caution and treated as the findings of a preliminary study with a limited sample. In particular, the people surveyed so far were part

of the first wave of firings in Ukraine, and may have different characteristics from people who are fired subsequently.

Our follow-up work will both broaden the sample of firms, follow people who are fired in 1993 and track over time people who were fired in 1992. We will try to obtain more information about people who voluntarily quit state enterprises and about wage differentials in the state and nonstate sectors. We may also attempt to measure what happens to the living standards of people who are forced to retire. We will also obtain more information about the firms which fire people and those which tend to hoard their labor.

## Appendix: Methodology

In December 1992, a member of our research team met with the head of the personnel department in 15 state enterprises in Kiev. In 13 cases she received data both about changes in total employment in the enterprise and about the number of people who had been fired -- the two exceptions were military enterprises. Our researcher further obtained a list of 40 people who had been fired in the course of 1992 from each enterprise. Half of the people on this list had secondary education and half had higher education. In two cases the enterprise had fired less than 40 people and our researcher obtained the list of all people who had been fired.

This same researcher then telephoned everyone on her lists during the last two weeks of December 1992. About 30 percent of people contacted refused to answer our questions (142 people out of 491). In total, 349 people answered the following nine questions.<sup>22</sup>

1. How many years did you work in the enterprise from which you were fired?
2. How old are you?
3. What is your education level: secondary school or higher education?
4. How many people are in your family?
5. How many of them are currently working?
6. Where do you work now: in the state sector or in the nonstate sector or are you unemployed?
7. (For those working.) Are you working in the same sphere as you worked previously?
8. (For those working.) Are you working in your specialty?

9. If you have your own business, is it connected with your specialty?

10. Do you plan to open your own business?

Table A1

Enterprise i.d.Number	<u>Production Profile</u>	
	Consumer Goods	Non-Consumer Goods
1 M	No Information	
2 C	Kitchen Hardware	Equipment for Trolleybuses and Trams
3 C	No Information	
4 C	Umbrellas, badges	Security Equipment
5 M/C	Kitchen Equipment	Military Equipment
6 M	No Information	
7 M	No Information	
8 C	None	Cinema Film Copies
9 M/C	None	Welding Equipment
10 M	No Information	
11 C	Sports Goods	Medicine
12 C	Plates	Food Processing Machinery
13 C	Bags, haberdashery	Plastic

Notes:

The letter in the column for enterprise i.d. number indicates whether the enterprise is civilian ("C"), military ("M") or military/civilian ("M/C").

Table A2

Enterprise Identity	Number Fired	Number of Respondents
1	30	25
2	49	20
3	146	25
4	138	25
5	241	30
6	21	20
7	2326	40
8	167	25
9	230	25
10	400	39
11	245	25
12	202	25
13	<u>69</u>	<u>25</u>
Total	4,264	349

"Number fired" is the third column of Table 4.

Table A3

Age	Total	<u>Education Level</u>	
		Higher	Secondary
20-25	82 [23%]	7 (9%)	75 (91%)
26-30	91 [26%]	65 (71%)	26 (29%)
31-35	55 [16%]	39 (71%)	16 (29%)
36-40	32 [9%]	11 (34%)	21 (66%)
41-50	79 [23%]	47 (59%)	32 (41%)
> 50	10 [3%]	3 (30%)	7 (70%)
Total	349 [100%]	172 [49%]	177 [51%]

[.] brackets express the number they are below as a percentage of the total sample size (i.e., 349).

(.) brackets express the number they are below as a percentage of the row total.

## Endnotes

1. One special feature of the former Soviet Union is that cramped living conditions mean that often two generations of wage earners live in the same apartment and to some extent pool their incomes.
2. In our assessment what people describe as the "nonstate" sector has two components: unlicensed individuals engaged in small-scale trade and so-called "small enterprises" which are engaged in a variety of activities. Many of these "small enterprises" were actually founded by state enterprises. The key distinction is therefore not legal property form, but whether this is a established "state" firm or a new "nonstate" firm.
3. The division between pure military and military/civilian firms was somewhat arbitrary, because the full production profile of military firms is secret, so it is hard to know what proportion of their output is accounted for by civilian goods. The division used here was based on available anecdotal evidence.
4. According to this list, 197 "nonmilitary" enterprises in Kiev employed a total of 210,368 full-time workers in September 1991. However, this list was limited to industrial firms with more than 250 workers, so we do not have information about small industrial firms. We also do not have enterprise-level data about employment in nonindustrial activities in Kiev.
5. Of course, a comparison between Kiev and any other city would have to take into account differences in the production profile of local firms. Kiev appears to have a relatively diversified industrial sector.
6. Our source is a telephone conversation with an official of the Kiev City Statistical Office, on January 21, 1992. The same source stated that in mid-1992 Kiev city had a population of 2.63 million, which implies that industrial employees make up 27 percent of the population.
7. This number further implies that there are about 40 military enterprises in Kiev, assuming each has average employment of 10,000. This estimate seems quite plausible.
8. For two enterprises, #1 and #6, less than 40 people were fired, and in those cases we obtained the list of everyone who was fired.
9. As described in the previous section, our sample so far is fairly small and our results with regard to the pattern of employment reductions across firms should be treated with care until verified by larger sample work.
10. Anecdotal evidence suggests that employment reductions only really accelerated in the second half of 1992, and this is particularly true of the number of people who were fired.  
We only obtained a monthly breakdown of firings from one enterprise (#13), which



showed that of the 49 people fired in 1992 (through November), only 9 were fired through the end of June and 22 were fired in the last three months of the year. People retired at a steady rate during the first eight months of the year -- of the 107 who went onto a pension in the whole of 1992, 17 went in the first quarter, 15 went in the second quarter, 19 in the third quarter -- but 61 retired in the last quarter and of this total, 52 left in November.

11. The difference between results for military and civilian/military enterprises should not be overemphasized, particularly because we have only 2 mixed enterprises in our sample and because it is fairly difficult to be sure precisely how much civilian output is produced by a military enterprise.

12. It is hard to see why anyone would want to retire at the present time: the average pension is around 4,800 rubles per month and there is very little variation about this mean.

13. It is possible that enterprises fired people who they think or know would like to quit -- or perhaps who have already effectively quit by not coming to work. However, we have no reliable evidence on this point.

14. It is not possible to obtain information on the level of production in enterprises which produce military goods.

15. The explanation of this point is that many of these people have just finished higher education. This is explored further in the discussion of Table 9 below.

16. Some people said they were planning a new business although they already operated their own private business. This number should be interpreted as an indicator of people's expectations about the extent of new business opportunities in the private sector.

17. We make this assumption because we do not know how such a high proportion of our sample -- 31 percent -- can have found new state sector jobs. It seems implausible that there are many net new jobs in industrial enterprises. Of our sample, only one enterprise reported that it had "new" jobs, but these were taken by people who would otherwise have been fired. It also seems implausible that there is sufficient turnover in employment. In an economy where it was rare to change jobs, it seems likely that people cling to employment even more when mass unemployment threatens.

Furthermore, it seems highly unlikely the new state sector jobs are in education or in state administration -- the Ukrainian government budget crisis means that there is little if any hiring going on. Some of these jobs may be in trading activities organized by state enterprises. This issue needs further investigation.

18. The 50/50 split in our sample on education levels meant we probably oversampled the 26-35 age group, to compensate for the high number of 20-25 year olds who were fired and who almost never have higher education.

19. Of course, these numbers indicate only the preferences of actual and would-be entrepreneurs and not necessarily where the real opportunities are.

20. Given the low level of living standards at present in Ukraine, it is unlikely that these women have voluntarily withdrawn from the labor force.

21. However, further state sector job losses may not mean that no one in these families works. Instead, someone may be forced out into a poorly paying job in the nonstate sector.

22. We did not ask a person's gender, but this was apparent from the person's name on the list.

Unfortunately, for three of the firms our interviewer misplaced the list of people contacted and we were not able to use this piece of information.