Nonstandard Forms and Measures of Employment and Unemployment in Transition:

A Comparative Study of Estonia, Romania, and Russia

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A sztenderd definicióktól eltérő foglalkoztatási és munkanélküliségi ráták Észtországban, Oroszországban és Romániában

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Összefoglaló

Az elemzés a sztenderd foglalkoztatási és munkanélküliségi ráták definícióinak kisebb megváltoztatásából eredő különbségeket elemzi három átmeneti gazdaságban. Az észt, orosz és román munkaerőfelvételek segítségével kiszámított alternatív ráták nagy különbségeket mutatnak a sztenderd rátákhoz képest. Számításaink kimutatják, hogy a foglalkoztatási ráta érzékenyen reagál arra, hogy a teljes termelésüket felhasználó mezőgazdasági dolgozókat és a fizetés nélkül, családi vállalkozás keretében dolgozókat foglalkoztatottnak tekintik-e vagy sem. A munkanélküliségi ráta pedig a elbátortalanodott dolgozók besorolására reagál érzékenyen. Ezek következtében viszonylag kis definícióváltozás sokkal magasabb foglalkoztatási rátát ad meg Oroszországban és sokkal alacsonyabbat Romániában, a munkanélküliségi ráta pedig mindhárom elemzett országban nő.

Tárgyszavak:

foglalkoztatás, munkanélküliség, Észtország, Oroszország, Románia

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Abstract

This paper looks behind the standard, publicly available employment and unemployment statistics that studies of transition economy labor markets have typically relied upon. We analyze microdata on detailed labor force survey responses in Russia, Romania, and Estonia to measure nonstandard, boundary forms and alternative definitions of labor force status. Our estimates show that measured employment and unemployment rates are quite sensitive to definition, particularly in the treatment of household production (subsistence agriculture), unpaid family helpers, and discouraged workers, while the categories of part-time work and other forms of marginal attachment are still relatively unimportant. We find that tweaking the official definitions in apparently minor ways can produce alternative employment rates that are sharply higher in Russia but much lower in Romania and slightly lower in Estonia, and alternative unemployment rates that are sharply higher in Romania and moderately higher in Estonia and Russia.

Keywords: employment, unemployment, Estonia, Romania, Russia

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1. INTRODUCTION

The typical focus of most research on aggregate labor markets in transition economies has been the unemployment rate and the employment-population ratio, which are standard concepts based on international conventions and published in nearly all countries around the world (e.g., ILO, 2001). An extensive literature has examined the differences across East European countries and the changes over time in these official statistics, using them to derive conclusions on such issues as the flexibility of adjustments, the effectiveness of passive and active labor market policies, and the social costs of transition.[1] But little consideration has been given to the possibility that statistical agencies in different countries may have adopted different definitions, even if they all conform to the international conventions, because the latter permit some flexibility in the classification of several ambiguous categories that are considered—in developed market economies—to be relatively unimportant. However, if the transition process tends to foster the growth of such nonstandard forms of employment and unemployment, this raises questions about the comparability of the official statistics and about the tendency of the transition literature to rely exclusively on conventional labor force measures. Even if the definitions are comparable, the statistics may be misleading if these non-standard forms of employment and unemployment are important, as their proportions can differ from country to country.

For example, the standard definition of employment includes a number of categories that differ substantially from the conventional picture of the long-term employee working regular full-time hours for a regular wage and expecting continued, perhaps indefinite, employment.[2] Not only are self-employed entrepreneurs excluded from this picture, but also such groups as part-time workers, temporary contractors, unpaid family helpers, those on temporary leaves, those who work solely to provide their own (and their families') consumption, and laid-off people who retain a formal attachment to the job. These categories are potentially quite large, and some of them may be treated differently in different countries. Yet there has been little attention to them in most research by economists studying labor markets in the transition economies.[3]

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[1] See, for example, Layard and Richter (1995) on employment and wage adjustment, and Boeri and Terrell (2002) on the effects of alternative levels of unemployment benefits.

[2] This definition follows Kalleberg, Reskin, and Hudson (2000), who discuss the characteristics of standard and nonstandard employment relations in the United States.

[3] Earle and Sakova (2000) study the self-employed in six transition economies, differentiating own-account workers from employers.

The definition and measurement of unemployment also involve substantial ambiguities. The statistical treatment of laid-off workers on recall, involuntary part-timers, discouraged workers, and others who are "marginally attached" to the labor force has in fact been extensively discussed by labor statisticians in the West, particularly in the United States, where the Bureau of Labor Statistics (BLS) regularly publishes "measures of labor underutilization" together with the monthly employment report based on the Current Population Survey (Bregger and Haugen, 1995). How important are these categories, and how are they treated by statistical agencies in different transition economies? Again, these issues have attracted little analysis.

The magnitudes of nonstandard types of labor force status have important implications for judging labor market performance and developing policy measures to improve it. If, for example, a country has many discouraged workers, temporary contract workers, involuntary part-time workers, and underemployed workers for economic reasons, while few self-employed entrepreneurs have emerged, the employment situation would be much worse than that captured by the standard employment and unemployment measures. The size of the subsistence agriculture sector affects the accuracy of standard poverty indicators and potentially also the effectiveness of wage subsidies for improving welfare.

A possible explanation why nonstandard types of labor force status in transition have received little attention, despite their potential importance, is lack of information. The data requirements for a careful analysis involve individual-level data from labor force surveys, which since the early 1990s have been collected in most East European countries. These data have tended to be jealously guarded by the statistical agencies, however, and access to them has usually been quite limited.

In this paper, we report the results of our analyses of nonstandard types of employment and unemployment using labor force survey microdata we have collected for three economies: Estonia, Romania, and Russia. Although our choice of countries is partially constrained by data availability, these three economies provide the possibility for an interesting set of comparisons, as they are structurally different and have adopted rather different policies in the transition. The differences can be seen, for instance, in rankings of "progress in reform" or "extent of liberalization" by international agencies such as the World Bank (1996), which placed Estonia in the top group of rapidly reforming post-socialist countries in Eastern Europe, Romania with a group of slower reformers, and Russia among the laggards.

Interestingly, however, such rankings bear little resemblance to the relative magnitudes of the reported rates of unemployment and employment in these countries. Figure 1 displays

unemployment rates (ILO definition) for eight transition economies, in order of increasing unemployment. The Romanian rate is the second lowest in the group, close behind Hungary's, while the Russian rate is also among the lowest. The Estonian rate is relatively high, however—almost as high as the rates in Bulgaria, Poland, and Slovakia. Employment-population ratios for the same countries are shown in Figure 2. The employment rates in Romania and Russia are the highest in the group, and Estonia's is also relatively high. These published rates clearly convey only limited information about labor market reforms and developments.

One might expect to see much different rates of nonstandard employment and unemployment across these countries, potentially reshuffling the labor market performance rankings. Agriculture was a much larger share of the socialist economy in Romania, so the possibilities for agricultural self-employment are likely to have been much greater in Romania. Firms were weaned off state subsidies much more quickly and exposed to more international competition in Estonia than in Romania or Russia, possibly providing clearer signals that they had to sever ties with a significant fraction of their workforce in order to survive.

We first provide a brief discussion of the characteristics of each country's labor force survey. Then we use these data to re-compute and examine the definitions of the official employment and unemployment indicators. For the most part, the results here correspond closely to the published official statistics, although in order to ensure age-comparable estimates we restrict the age range to 15–72 (as used in Russia). Next we consider several types of nonstandard or boundary categories of employment and unemployment: temporary contracts, voluntary and involuntary part-time workers, nonsearching job-losers, unpaid family helpers, discouraged workers, and household producers—particularly those in agriculture who consume all or most of their output. Finally, we re-estimate the employment-population ratios and measures of labor underutilization under alternative definitional assumptions. Section 2 describes the surveys, and sections 3 and 4 report the nonstandard employment and unemployment results, respectively. Section 5 provides some concluding remarks.

2. THE DATA

We use 1994 and 2001 data from the three countries' labor force surveys. Though other years are available, we have chosen these years both because they provide a time dimension (early versus later transition) and because a larger number of the labor force indicators are available

in these years than in some other years.[4] We describe each country's labor force survey in turn below.

2.1. ESTONIA

The 1995 Estonian Labor Force Survey (ELFS) sampled around 10,000 working-age individuals in the first quarter of the year. The 2001 ELFS was conducted in quarterly waves. Though the survey covers workers over the age of 72, we restrict our analysis to persons between the ages of 15 and 72 so as to be comparable to the sample in Russia. We obtain 1994 data using the 1995 survey, which contains a retrospective labor market history section providing details of changes in labor market status and income between January 1989 and December 1994. Unfortunately, these retrospective data do not contain information on the availability of nonemployed respondents, although they do contain information about their search activity. To calculate unemployment and nonparticipation in the labor force in 1994, therefore, it was necessary to ignore the ILO availability criterion in calculating unemployment according to the standard definition. The Estonian data also contain no information on job losers who are not searching but expecting recall, an essential category for calculating unemployment according to the "partially relaxed" ILO definition.

2.2 ROMANIA

The Romanian Labor Force Survey was conducted in March 1994, March 1995, and quarterly thereafter. For comparability with the other countries and in order to avoid seasonal bias, we report only our analysis of the surveys in March 1994 and the first quarter in 2001.[5] Each sample is representative, and weights to produce population estimates are provided for each.[6] The sample size is 31,375 in 1994 and 33,571 in 2001. The analysis was restricted to individuals between the ages of 15 and 72 so as to be comparable to Russia.

2.3 RUSSIA

The 1994 Russian Labor Force Survey (RLFS), carried out in October, sampled 618,120 individuals or about 0.5 percent of the target population (aged 15–72). The 2001 RLFS was

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[4] Results for other years are available on request.

[5] The methodological issues are discussed at length in CEU Labor Project (2003), which provides a detailed comparison of the Romanian questionnaire design with ILO recommendations and with the labor force survey in the United States, the Current Population Survey.

[6] There is some question whether the sample weights became increasingly biased between the decennial censuses of 1992 and 2002. It is possible that the officially reported labor force figures, as well as the 2001 numbers reported in this paper, will be—or should be—revised on the basis of the 2002 census.

done quarterly, with each sample including 72,836 individuals or about 0.07 percent of the target population. We report the results from the November survey so as to be consistent with the 1994 data. Major revisions were made to the questionnaire between 1994 and 2001. Weights in 1994 were based on the last pre-reform census of population in 1989, and the 2001 weights are based on the 1994 micro-census. Analysis of the 2002 Census of Population may result in some corrections in weights, possibly affecting estimates for 2001, but these new weights are still unavailable.[7]

3. NON-STANDARD TYPES OF EMPLOYMENT

The official definition of employment in each country follows closely the ILO recommendations, but they also differ from each other in several respects. The ILO-recommended definition includes persons who worked at least one hour during the reference for pay or profit, in cash or in kind, or had a job but were absent from work for some well-specified reason (mostly vacation or sick leave).[8] Consistent with European conventions, but unlike the United States, the definitions in the countries we study count as employed those working zero hours so long as they evince a "formal attachment" to their job. A still more substantial difference, in the Romanian case, is that subsistence farmers, with not commercial sales, are counted as employed. A final comparability issue (in this case, both across countries and over time) results from a revision to the treatment of unpaid family helpers in the Romanian survey in 1996, when the minimum hours worked for such individuals to be considered employed was set at 15 for those working in agriculture. A similar rule is used in the United States for all unpaid family helpers, but it appears to be uncommon elsewhere, and it results in some noncomparability in the official employment time series.[9]

According to the official definitions, the employment-population ratios are slightly above 60 percent in all countries in 1994, and they are slightly lower in 2001 everywhere, as Figure 2 shows. Restrictions of the definitions, which we will consider below, would exclude own-account workers and unpaid family helpers in agriculture, half of involuntary part-timers, and laid-off persons with formal attachment to the job. We also show the extent of temporary work—voluntary and involuntary—and underemployment for economic reasons.

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[7] For a description of the RLFS, see Goskomstat (2002).

[8] Persons serving in the military are also included in reported employment, as are persons who performed various kinds of occasional or exceptional work for at least one hour.

[9] In the United States, the issue is trivial, as unpaid family workers account for only about 0.1 percent of all employment. In Romania, as we shall show, the share of this group is much larger.

Workers on temporary contracts comprise only a small fraction of each country's workforce, as Table 1 indicates. Such workers typically make up 2–3 percent of the population, except in Russia in 2001, where their proportion is almost 7 percent. The size of the group appears stable in Romania, while it has more than doubled in Russia, reaching a level similar to the United States and some other advanced industrialized economies. The Russian expansion has occurred despite strict legal constraints and prohibitions that the labor legislation still contains (*Labor Code*, 2002).[10] A sizable proportion of temporary workers have such a contract against their will: involuntary temporary employment, an indicator of labor underutilization, accounts for about three quarters of the temporary contract category in Estonia and Romania and 44 percent in Russia.

The ILO definition of underemployment for economic reasons includes persons in paid or self-employment, at work or not at work during the reference period, involuntarily working zero hours or less than the normal duration, and willing and available to work more hours. The "less than usual duration of a work week" is left to the subjective opinion of the respondent, and cases where this could not be evaluated are treated by applying the 30 hours threshold. This category makes up a small fraction of the workforce, ranging from 2.7 percent in Estonia to 0.1 percent in Romania in 2001. This group has become much smaller over time in Russia. Therefore, it does not appear that forced leave or involuntary part-time are widely used adjustment tools in response to negative shocks.

Table 3 changes the focus to part-time work considered more broadly and classified by reason for working part-time: voluntarily or involuntarily. Individuals fall into the involuntary category—and thus are considered to be underutilized—if they meet the following criteria: declare working part-time, actively look for work, and are available to start working within the next 15 days. Also, the total actual hours of work from all activities should be less than the 30 hours threshold.[11] We find that less than ten percent of employees work part-time, compared to the United States, where part-time work (defined as less than 35 hours per week) accounts for about 18 percent of total employment. The incidence is highest in Romania, followed by Estonia. When comparing 2001 to 1994, the level is nearly a quarter higher in Romania, over twice as high in Estonia and nearly fifty percent lower in Russia. Where we are able to measure the voluntary status of part-time work, it is voluntary over 85 percent of the time, implying that it does not reflect labor market slack. Within the voluntary

[10] The GKS changed the wording of the relevant RLFS question (see GKS, 2002), which may have contributed to the increase in reported temporary employment. For a thorough analysis of temporary employment in Russia, see Gimpelson (2003).

[11] One problem with this measurement could be seasonal fluctuations. Part-time work is likely to be more common in the summer months, making it difficult to compare first-quarter figures in Romania and fourth-quarter figures in Russia to second-quarter figures in Estonia.

category, however, a fairly large and growing fraction of Romanian part-timers report an inability to find a full-time job as the reason; although they do not search or are not available for full-time work—which is why they are officially categorized as voluntary. This group might be considered a kind of "partly discouraged worker," analogous to the usual category we might call "fully discouraged." Adding this group together with the involuntary part-timers yields a total of about 3.5 percent of all Romanian employment in 2001, an economically significant size.[12] "Partly discouraged" workers are also a significant group in Estonia (and Russia in 1994), where much of the voluntary part-time work is due to a change in schedule initiated by the employer, while these workers are not searching or are not available for full-time work.

Tables 4 and 5 turn attention to two closely related, nonstandard categories of employment: own-account workers and unpaid family helpers.[13] In Romania, the one country where we are able to measure these categories well, both are very important. Taken together, they account for 32 percent of total employment in 1994 and 38 percent in 2001; more than 90 percent work in agriculture, mostly as subsistence farmers. Unfortunately, the Estonian numbers and the Russian 1994 numbers do not include subsistence farmers, since those LFS's do not include household production questions. The Russian subsistence farmers in 2001 are all classified as own-account workers by the Russian Goskomstat (GKS). The combined own-account worker and unpaid family helper categories are about three times as large in Romania compared to Russia in 2001. Commercial family farming is a much more common activity in Romania than in Estonia or Russia, accounting for 6.5, 1.7, and 2.1 percent of employment, respectively.[14] This reflects the fact that most of Russian agriculture continues to be organized into large-scale farms, while such farms were broken up at the beginning of the Romanian transition.

Non-agricultural self-employment is a tiny fraction of employment in all three countries. Assuming that better business environment fosters the growth of self-employment, one would expect that Estonia had the largest proportion of such workers, followed by Romania,

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[12] We do not consider this category in our computations of alternative unemployment or labor underutilization rates below, but clearly if we did so, for instance adding half of them to the unemployed pool, the rate would rise by about 1.5 percentage points.

[13] These two categories are closely related due to the problem of classifying multiple family members working unpaid (i.e., not receiving a regular wage) in a family business; one practice would be to designate them all as own-account, and another is to designate one member of the family as own-account and the rest as unpaid helpers (e.g., ILO, 1990, p. 171). How this is applied in practice depends on specific family situations and interviewers' interpretations.

[14] The relevant Estonian LFS questions are worded in such a way that agricultural own-account workers and unpaid family helper categories are likely to include only those involved in production for sale.

with Russia lagging behind.[15] In 2001 it is nearly as large in Russia as Romania, however, with 2.6 percent of employment relative to 3.1 percent in Romania and 0.5 percent in Estonia.

Based on this analysis of nonstandard forms of employment, we have computed alternative measures of the employment-population ratio. Alternative ratios are provided in Table 6, ordered from broadest to narrowest definition. Since subsistence farmers are not accounted for in 1994 in Russia or in either 1994 or 2001 in Estonia, we are unable to calculate a ratio including them in those countries and years. We are also unable to calculate a ratio excluding only subsistence farmers in 1994 in Romania, because subsistence farmers cannot be distinguished from other own-account workers and unpaid family helpers in the LFS. In the countries and years where we can isolate subsistence farmers, the employment-population ratio is quite sensitive to how subsistence farmers are treated: the rates drop by 12 percentage points in Romania and four percentage points in Russia in 2001. When excluding subsistence farmers, Romania's rate is 11–12 percentage points smaller than Estonia and Russia's rates. The similarity in the Estonian and Russian rates in both 1994 and 2001 is striking considering their quite different reform strategies.

Excluding other own-account workers and unpaid family helpers in agriculture also has a large effect in Romania (a drop of 6.2 percentage points in 2001, the year we can measure this), though not in Estonia or Russia in either 1994 or 2001, reflecting a much larger commercial family farming sector in Romania.[16] This further widens the gap between the Romanian and Estonian and Russian employment-population ratios. The exclusion of half of involuntary part-timers has little effect anywhere, as the largest effect is a drop of just 0.7 percentage points in Estonia in both 1994 and 2001. Excluding laid-off persons has a similar negligible effect, the largest being 0.7 percentage points in Russia in 1994.

4. FORMS OF LABOR UNDERUTILIZATION

Similarly to the definition of employment, unemployment is also defined differently in the countries we study. The Estonian and Russian unemployment rates are computed on the basis of the standard ILO definition, while in Romania the ILO's "partially relaxed"

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[15] For regulatory quality in 2000, Estonia received a score of 1.33, Romania -0.27 and Russia -1.58. The same order applies for rule of law (0.71, -0.22 and -0.87) and for control of corruption (0.78, -0.45, -1.02) (Kaufmann, Kraay, and Mastruzzi, 2005).

[16] Indeed, as the ILO database for 2001 documents, agriculture accounted for 6.5 percent of employment in Estonia, 10.6 percent in Russia, and 42 percent in Romania.

unemployment definition is used.[17] The sole difference between the two definitions is that the "partially relaxed" definition does not require searching for laid-off workers expecting recall. Using the partially relaxed definition would not affect the Russian unemployment rate, as Table 7 shows. On the other hand, the Romanian unemployment rate would be 0.7 percentage points lower in 2001 if the standard definition was applied.

This section analyzes how taking account various forms of labor underutilization may alter the measured unemployment rate. First, we look at laid-off persons, job losers, who retain no formal attachment to their job. This category of unemployed may experience particular hardship; in the U.S., there is much evidence that displaced workers suffer large losses in income in both the short run and the long run (Kletzer, 1998).[18] Also the definitional differences between the countries we study concern part of the laid-off workers. Second, we present evidence on discouraged workers and show how the inclusion of this non-standard form of unemployment changes the unemployment rates in the countries.

Next we turn attention to laid-off workers who retain no formal attachment to the job. Following the "partially relaxed" ILO definition (used in Romania but not in Estonia and Russia), laid-off persons are also considered unemployed (even if not searching) if they report that they expect recall to the former job. Overall, laid-off workers (job losers) account for most unemployed individuals in Estonia (59.0 percent of standard unemployment in 2001), but only 43 percent (of partially relaxed unemployment) in Romania and 31 percent (of standard unemployment) in Russia, both in 2001. Unfortunately, information on expecting recall is unavailable for Russia in 2001 and for Estonia in any year, but this category makes up only 7.2 percent of the laid-off in Romania, and their proportion decreases to a mere 2 percent in 2001. In Russia, this category makes up only 1.7 percent in 1994.

The second category of non-standard unemployment that we look at more closely relates to discouraged workers, defined as a person not working, available but not searching due to the following reasons: they believe that there are no available jobs, they do not know how to search, they believe they do not have suitable skills or are too old to find a job, or they sought a job before but did not find one. The standard ILO definition treats these people as nonparticipants in the labor force, although in a "fully relaxed" definition they are considered unemployed.

Table 9 presents the proportion of discouraged workers both as a fraction of nonparticipant population and of unemployed population (which, unlike the standard

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[17] The exception to use of ILO criteria is Estonia in 1994, where information on availability was not requested on the retrospective survey in 1995. The "partially relaxed" measure is not available in Estonia in either year.

[18] The evidence is less clear in Eastern Europe; see Lehmann et al. (2005) for Estonia.

definition, includes discouraged workers). The fraction of discouraged workers out of nonparticipants varies between 2.3 and 7.6 percent, depending on the country and period. The fractions are smallest in Russia, where they are 2.3 percent in 1994 and 3.8 percent in 2001. In Estonia they are larger by over two percentage points, and in Romania they reach 5.5 percent in 1994 and 7.6 percent in 2001. We also present the fraction of the discouraged workers consisting of people who had some work experience before versus newcomers to the labor market.[19] Almost all discouraged Estonian workers had some work experience. In Russia about 75 percent of them had previous work experience, while in Romania less than two-thirds had a job before.

Alternative measures of labor underutilization and unemployment rates are shown in Table 10. According to the standard ILO methodology (U-0), unemployment is the lowest in Romania (7.6–7.8 percent of the labor force in 1994 and 2001, respectively). In Russia the unemployment rate is larger by a half percent in 1994 and by one percent in 2001. Estonia has much higher unemployment, at 11.6 and 12.5 percent in the two years studied. Long-duration unemployment (U-1, defined as longer than 15 weeks) accounts for a large share of the total in each country, and its share increases in Romania and Russia (the figure is not available for 1994 in Estonia). In 2001 about two-thirds of the unemployed in Estonia and Russia and half in Romania are long-term unemployed. The job loser category (U-2) is also a large fraction of the unemployed: 58 percent in Estonia, 60 percent in Romania, and 30 percent in Russia. Including temporarily laid-off persons who lack a formal attachment to a job but who expect recall (U-3) increases the measure only slightly where it can be calculated (Romania in both years and Russia in 1994). Adding discouraged workers to the rate (U-4) increases the unemployment rate everywhere, but it produces the largest change in Romania, where it rises by two percentage points in 1994 and four in 2001. In the other countries the increase is more modest, adding 1–2 percentage points to the unemployment rate. Finally, adding half of the persons working part-time for economic reasons contributes the least in Russia in 2001 (0.2 percentage points) and the most in Estonia in 2001 (one percentage point). The resulting U-5 is in double digits in all countries in both years. In 2001, this unemployment rate measure is higher than the standard ILO rate by 2.2 percentage points in Russia, 3.9 in Estonia, and 4.3 in Romania, showing the importance of considering non-standard labor underutilization measures. According to this most relaxed measure, Romania and Russia have very similar unemployment rates in 1994 (10.7 and 10.5 percent), while

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[19] These numbers are not available for Estonia and Russia for 1994.

Estonia has 14.2. In 2001 Russia has the smallest unemployment rate (11.3); Romania is almost one percentage point larger (12.1), and Estonia has 16.4 percent.[20]

5. CONCLUSION

The standard labor market information available to economic policymakers around the world consists of only two statistics: official employment and unemployment rates. These are also the figures that attract the most attention from the press and assorted popular analysts and "pundits."   Witness, for example, the recent preoccupation with the condition of the American labor market based on the "loss of jobs" under the current government (some 2 million since 2001) and the excitement generated by the negligible increase of 57,000 in September 2003. Or, to take another example, the magic number of 4 million unemployed in Germany, a reduction below which the Schröder government set as its own fundamental economic litmus test. In developed market economies such as these, one may certainly question whether the official measurements of employment and unemployment adequately capture the true labor market situation, and related questions of nonstandard types of employment are reflected in the discussion and the debate about "good" versus "bad" jobs. The labor force surveys are designed to capture the standard types of labor force status in these countries, but there is nevertheless significant awareness and discussion of nonstandard forms of employment and unemployment.

   The transition economies have adopted the standard LFS questionnaire without major modifications, but it seems even more likely that exclusive reliance on standard classification schemes might fail to reflect important facts about the labor market. Not only the usually cited types of nonstandard forms of employment, such as temporary contracts and part-time work, but also unpaid family helpers, own-account workers engaged in subsistence agriculture, and nonworking individuals with a formal attachment to a job may be quite important in the context of economies adjusting to large shocks. Concerning nonstandard forms of unemployment, categories such as discouraged workers, involuntary part-time employees, laid-off people who are not searching because they expect to be recalled, and other marginally attached workers may be similarly significant.

   While it seems plausible that these nonstandard categories are large in the transition economies, however, and again by contrast with developed market economies, there has been

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[20] These figures exclude job losers not searching but expecting recall in Estonia in both years and in Russia in 2001, because this information is unavailable.

only scant attention paid to the nonstandard forms in these countries. Instead, researchers have tended to generalize quite quickly from the official aggregate statistics to draw inferences on how flexibly the labor markets are adjusting. And these inferences have proceeded even in the absence of understanding that the official statistics may vary in meaning from country to country. It has been our purpose in this research to redress this serious gap in economists' understanding of labor market functioning in these countries.

Our results show that the nonstandard forms of employment focused on in Western studies—temporary contracts, part-time work—are still relatively small in the three transition economies we study. Figure 3 summarizes our results for alternative calculations of the employment-population ratio. In the Estonian case, we find rather little of any type of nonstandard employment that we can measure. The rates of subsistence family farming are particularly high in Romania and Russia (not measurable in Estonia), however. Interestingly, the treatment of this type of employment in the official statistics is opposite in these two countries: in Romania they are included, while in Russia they are excluded. These figures are large enough to affect the measured employment-population ratios quite substantially. In Russia, including such workers would increase the ratio by 9.5 percentage points in 2001. In Romania, if such workers were excluded from the employment measure, then the employment-population ratio would decline by 12.4 percentage points in 2001. Thus, while the official employment rates are rather similar at around 58 percent in the two countries, this is an artifact of different definitions for subsistence farmers: including them in Russia would raise the rate to about 63 percent, while excluding them in Romania would reduce it to about 46 percent.

Figure 4 summarizes our analysis of alternative forms and measures of labor underutilization. We find much lower rates of involuntary part-time employment in all three countries than, for example, in the United States, where involuntary part-timers typically account for about 3 percent of the labor force. All three countries, however, exhibit high rates of discouraged workers. If these individuals were included when computing the unemployment rate, the result would be an increase of about 1 percentage point in Estonia, 2 in Russia, and 4 in Romania in 2001. By contrast, including discouraged workers in the U.S. unemployment rate in August 2003 would have raised the measured unemployment rate by only 0.2 percentage points. Given that discouraged workers have typically been long-term unemployed who have given up searching, our results suggest that the long-term unemployment problem in these countries is still much greater than implied by official statistics, and this problem should be a central focus for policymakers.

These findings have several types of policy implications. The low rate of part-time work, particularly relative to the United States, may reflect high payroll taxes to pay for benefits like health insurance that are not granted to most part-time employees in the U.S. It is possible the relative cost of part-time employees is higher in the three countries we study; one policy proposal could be to lower taxes and contributions associated with part-time labor.

Concerning the high rate of subsistence activity in agriculture, our results suggest that the Romanian and Russian employment record is extremely sensitive to the treatment of this borderline category. More research is necessary on the characteristics of these individuals, including their previous labor market history.[21] But the mere size of the population share in this category suggests that measures of income distribution that focus on money incomes and expenditures alone may be seriously misleading about the magnitude of poverty, and social programs designed to improve earnings for individuals in paid employment—for instance, through wage subsidies—may have little or no impact on this group. On the other hand, if there is a highly elastic response of supply to paid jobs among subsistence farmers, then such policies might in fact help the situation considerably. Most likely, this group is not only large but heterogeneous, and while it may be only partially handled by incentives to move into standard employment, the long-term poverty issue will remain. These questions about characteristics and behavior—in particular, the labor supply elasticities—should be high on the priority of policy-relevant research. For Romania, they are particularly interesting in light of the probable accession to the EU in coming years, both because of the rise in foreign investment, trade, and tourism and because the Romanian agricultural sector will come under the restrictions of the Common Agricultural Policy. The former factors will tend to pull workers out of agriculture, while the latter may function more as a push.

Finally, we find that discouraged workers exist in large numbers in the countries we study. These people are usually long-term unemployed who have given up searching, and therefore our results suggest that the long-term unemployment problem is perhaps even much worse and more intractable than would appear from official statistics. Although further research would be useful to verify the characteristics of discouraged workers, the findings suggest that policies should be focused on preventing and treating long-term unemployment.

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[21] See Earle (1997) for an initial analysis of these questions using Romanian data from the mid 1990s.

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Figure 1: Unemployment Rate (ILO Definition, %), 2001
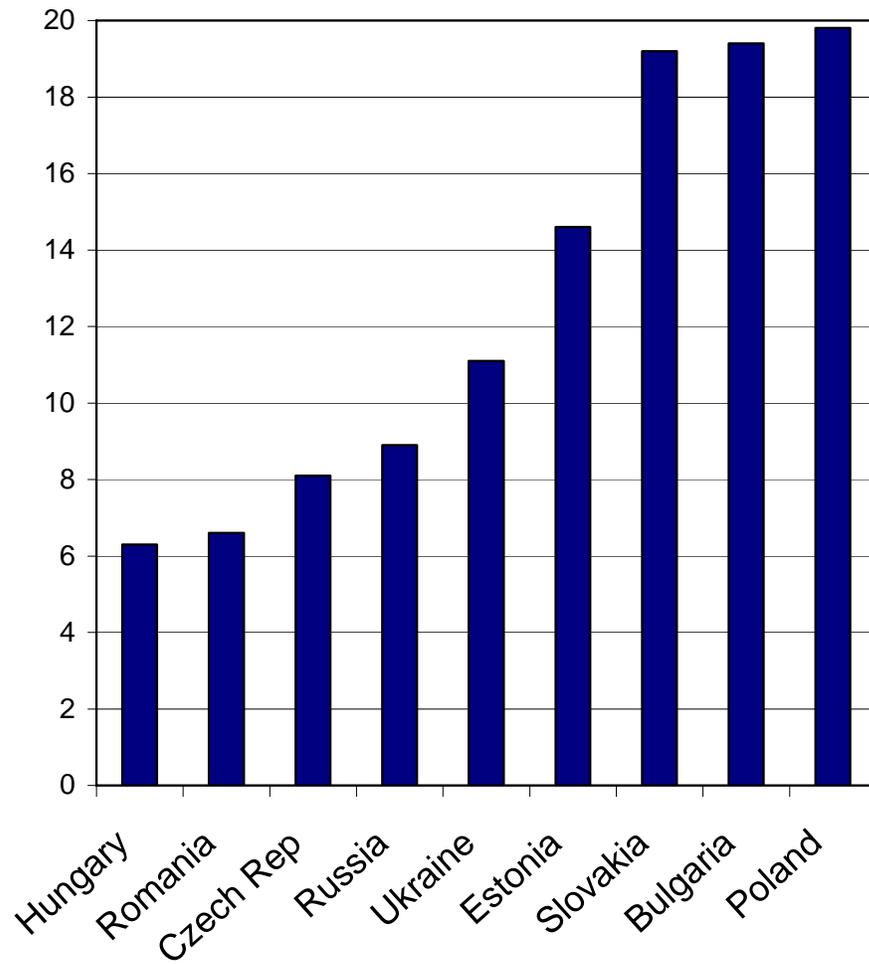
Source: ILO (2001).

Figure 2: Employment-Population Ratio (ILO Definition,%), 2001
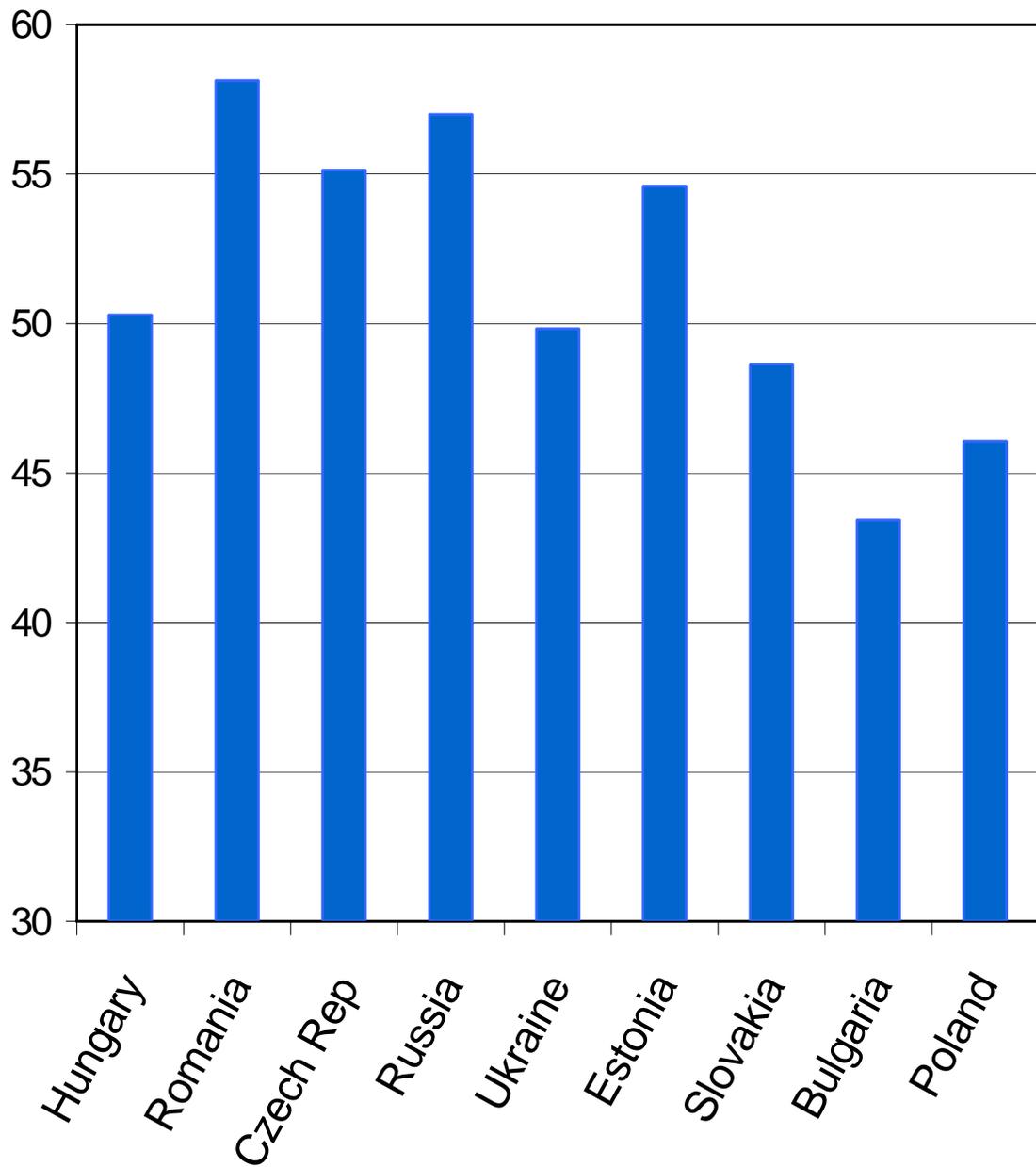
Source: ILO (2001).

Table 1: Employees on Temporary Contracts

(percent of employed)

	Estonia		Romania		Russia	
Temporary workers	**1994**	**2001**	**1994**	**2001**	**1994**	**2001**
Involuntary	n.a.	2.5	1.3	1.3	1.1	n.a.
Voluntary or for other reasons	n.a.	0.7	0.6	0.5	1.4	n.a.
Total percent	n.a.	3.2	2.0	1.8	2.5	6.8
Total number *(thousands)*	n.a.	19	213	180	1,617	4,402

Notes: Employees on temporary contracts are classified as involuntary if they report they could not find a permanent job. n.a. = not available.

Table 2: Underemployment for Economic Reasons

(percent of employed)

	Estonia		Romania		Russia	
Underemployed for Economic Reasons	**1994**	**2001**	**1994**	**2001**	**1994**	**2001**
By hours worked						
Working 0 hrs.	n.a.	0.0	0.0	0.1	1.3	0.1
Working more than 0 hrs.	n.a.	1.7	0.0	0.1	1.0	0.2
By reasons						
On firm initiated unpaid leaves	n.a.	1.0	n.a.	0.0	1.1	0.1
On firm initiated part-time work, worked 0 or more hrs.	n.a.	0.3	0.0	0.2	1.2	0.1
Job changes during the reference week	n.a.	0.0	0.0	0.0	0.1	0.0
Total percent	n.a.	1.7	0.0	0.2	2.3	0.3
Total number (thousands)	n.a.	10	2	20	1,506	195

Notes: Underemployment refers to involuntarily working fewer hours than "usual." In Romania, cases where the respondent could not estimate the usual duration of a work week were included if involuntarily working fewer than 30 hours; the rates computed for 1994 require job search during the reference week. The Russia estimates in this table exclude part-time workers. n.a. = not available.

Table 3: Part-Time Workers

(percent of employed)

Employment status	Estonia		Romania		Russia	
	1994	**2001**	**1994**	**2001**	**1994**	**2001**
Full-time	96.5	92.6	92.6	91.9	96.9	98.1
Part-time	3.5	7.4	7.4	9.1	3.1	1.9
Involuntary (searching and available)						
Did not find full-time job	n.a.	0.7	0.5	0.9	0.1	0.2
Temporary change in schedule initiated by employer	n.a.	0.4	n.a.	0.0	0.1	0.1
Voluntary (not searching or not available)						
Did not find full-time job	0.2	0.7	1.1	2.6	0.2	0.3
Temporary change in schedule initiated by employer	1.1	1.0	n.a.	0.1	1.6	0.3
Did not want a full-time job	0.3	3.2	0.7	3.3	0.4	0.4
Due to schooling or training	0.7	0.7	0.3	0.1	n.a.	0.1
Due to sickness or handicap	0.3	0.3	1.8	0.6	n.a.	0.1
Due to family responsibilities	0.5	0.5	2.2	1.3	n.a.	0.2
Due to other reasons	0.5	0.0	0.8	0.2	n.a.	0.2
Total with part-time job *(thousands)*	22.8	43.0	777	907	1,986	1,227

Notes: Part-time/full-time status defined according to self-assessment. n.a. = not available.

Table 4: Own-Account Workers

	Estonia		Romania		Russia	
Own-Account Workers	**1994**	**2001**	**1994**	**2001**	**1994**	**2001**
Agricultural, of which	n.a.	0.9	15.9	18.1	n.a.	9.0
Consuming all	n.a.	n.a.	n.a.	11.6	n.a.	6.9
Consuming and selling	n.a.	n.a.	n.a.	6.5	0.0	2.1
Nonagricultural	n.a.	0.5	1.5	2.6	1.4	2.6
Total percent	2.7	1.4	17.4	20.7	1.5	11.6
Total number (thousands)	17.5	7.8	1,851	2,050	953	8,035

(percent of employed)

Notes: Own-account workers are self-employed with no employees. n.a. = not available.

Table 5: Unpaid Family Helpers

	Estonia		Romania		Russia	
Unpaid family helpers	**1994**	**2001**	**1994**	**2001**	**1994**	**2001**
Agricultural	n.a.	0.8	14.6	16.5	n.a.	n.a.
By hours of work in reference week						
< 15 hrs.	n.a.	0.0	1.5	0.0	n.a.	n.a.
15 to 29 hrs.	n.a.	0.1	4.1	8.3	n.a.	n.a.
≥ 30 hrs.	n.a.	0.7	9.0	8.2	n.a.	n.a.
Nonagricultural	n.a.	0.0	0.2	0.5	n.a.	n.a.
Total percent	0.9	0.8	14.8	17.0	0.1	0.0
Total number *(thousands)*	5.5	4.4	1,580	1,679	77	25

(percent of employed)

Notes: In Romania since 1996, unpaid family helpers in agriculture working less than 15 hours during the reference week have not been counted as employed and cannot be identified in the data.

Table 6: Alternative Measures of the Employment-Population Ratio

(percent of population)

Employment ratio		Estonia		Romania		Russia	
		1994	**2001**	**1994**	**2001**	**1994**	**2001**
E-0	Broadest Definition	n.a.	n.a.	62.4	58.7	n.a.	62.9
E-1	Excluding subsistence farmers (both own-account workers and unpaid family helpers)	60.6	57.2	n.a.	46.3	60.1	58.6
E-2	Excluding other own-account workers and unpaid family helpers in agriculture	58.5	56.0	43.4	40.1	60.0	57.3
E-3	Excluding half of involuntary part-timers	57.8	55.3	43.3	39.9	59.9	57.2
E-4	Excluding laid-off persons with a formal attachment to the job	57.6	54.3	43.0	39.8	59.2	57.1

Notes: Official definition is E-0 for Romania and E-1 for Estonia and Russia. Laid-off persons with a formal attachment to the job are persons who worked zero hours due to unpaid leave initiated by the employer. n.a. = not available.

Table 7: Standard Measures of the Unemployment Rate

(percent of population, age 15 - 72)

Labor force status	Estonia		Romania		Russia	
	1994	**2001**	**1994**	**2001**	**1994**	**2001**
Standard ILO definition (Estonian and Russian official)						
Unemployment	7.9	8.2	5.0	4.9	5.3	5.7
Not in the labor force population	31.4	34.6	32.6	36.4	34.6	35.7
Partially relaxed ILO definition (Romanian official)						
Unemployment	n.a.	n.a.	5.7	5.0	5.4	n.a.
Not in the labor force population	n.a.	n.a.	31.9	36.3	34.5	n.a.
Population aged 15–72 *(thousands)*	1,069	1,014	17,062	16,860	107,839	110,411

Notes: Estonian unemployment in 1994 is calculated from retrospective questions that use the standard ILO criteria of nonworking and searching, but not the criterion of availability, as this information is not available retrospectively. The ILO partially relaxed definition of unemployment does not require searching for laid-off workers expecting recall; this information is not available for Estonia in either year.

Table 8: Laid-Off Workers

(percent of unemployed, partially relaxed definition)

Laid-off workers with no formal attachment to the job	Estonia		Romania		Russia	
	1994	**2001**	**1994**	**2001**	**1994**	**2001**
Searching and available	n.a.	59.0	38.2	40.5	33.2	30.7
Not searching, but available and expecting recall	n.a.	n.a.	7.2	2.0	1.7	n.a.
Total percent of unemployed (partially relaxed definition)	n.a.	n.a.	45.4	42.5	34.8	n.a.
Total number (*thousands*)	n.a.	62	427	359	2,021	1,938
N.B.: Unemployed not laid-off	n.a.	41.0	54.6	57.5	65.2	69.3

Notes: The ILO "partially relaxed" definition includes those not searching but available and expecting recall as unemployed; this is the official definition in Romania, but not in the other two countries. Information on expectation of recall is unavailable in Estonia for either year and in Russia for 2001; therefore the partially relaxed definition cannot be calculated and figures are shown as a percentage of unemployed according to the standard definition. n.a. = not available.

Table 9: Discouraged Workers

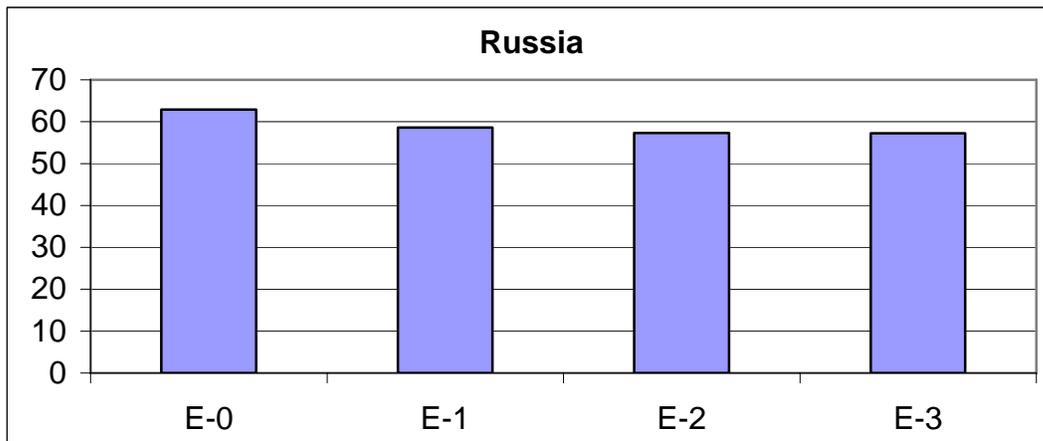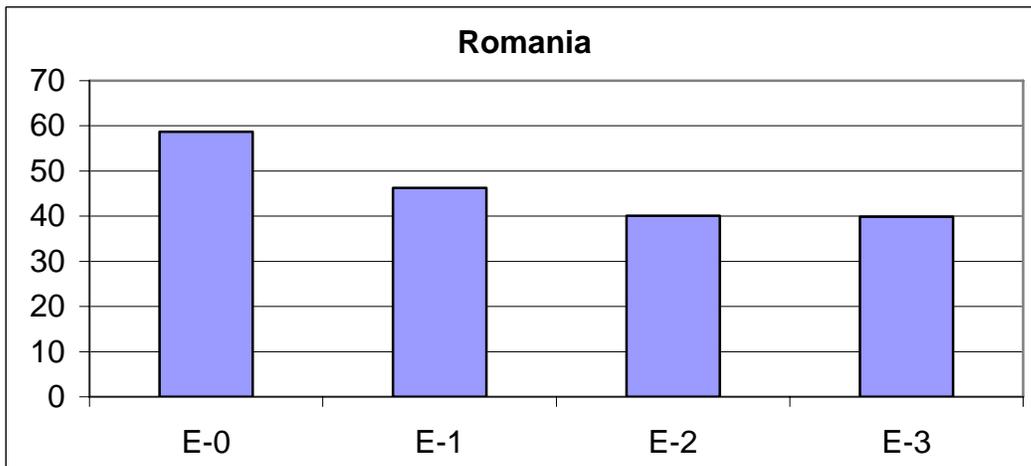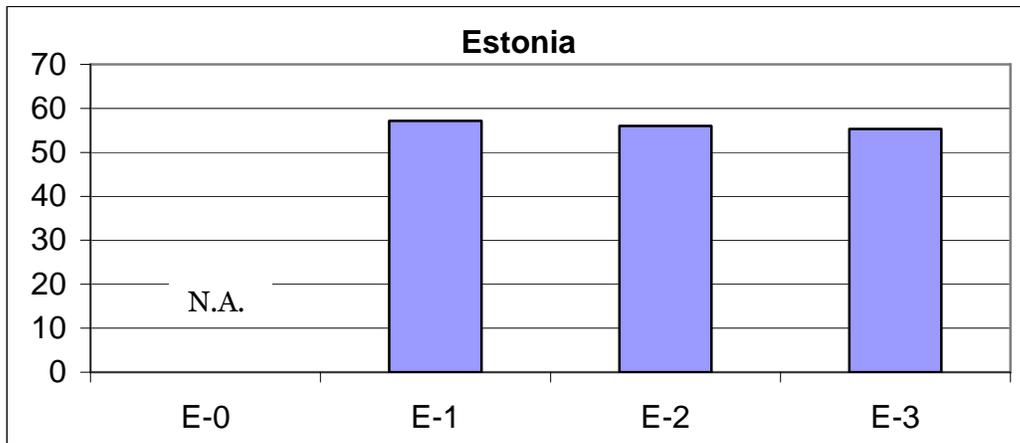|	Estonia		Romania		Russia	
	1994	**2001**	**1994**	**2001**	**1994**	**2001**
Percent of not in the labor force (official definition)	4.8	6.5	5.5	7.6	2.3	3.8
Previous work experience	n.a.	6.1	3.2	4.8	n.a.	2.9
No previous work experience	n.a.	0.4	2.3	2.8	n.a.	0.9
Percent of unemployed (fully relaxed definition)	15.8	21.4	27.8	42.9	13.1	19.1
Previous work experience	n.a.	20.2	14.2	22.7	n.a.	14.7
No previous work experience	n.a.	1.2	13.6	20.2	n.a.	4.4
Total number (*thousands*)	16	23	306	467	862	1,489

Notes: Discouraged workers are defined as persons not working, available for work and not searching for a job because they believe no work is available, or similar reasons. Discouraged are counted as unemployed in the ILO's "fully relaxed" definition, but they are not unemployed according to the official definition of unemployment in any of the three countries. n.a. = not available.

Table 10: Alternative Measures of Labor Underutilization

(percent of labor force)

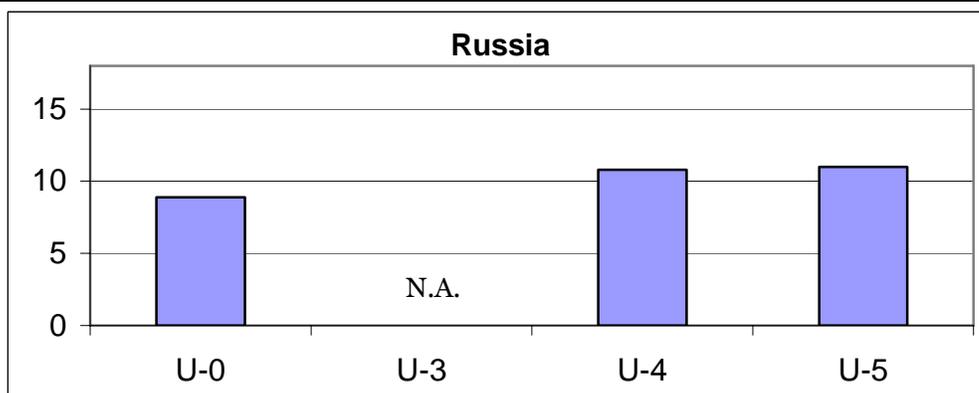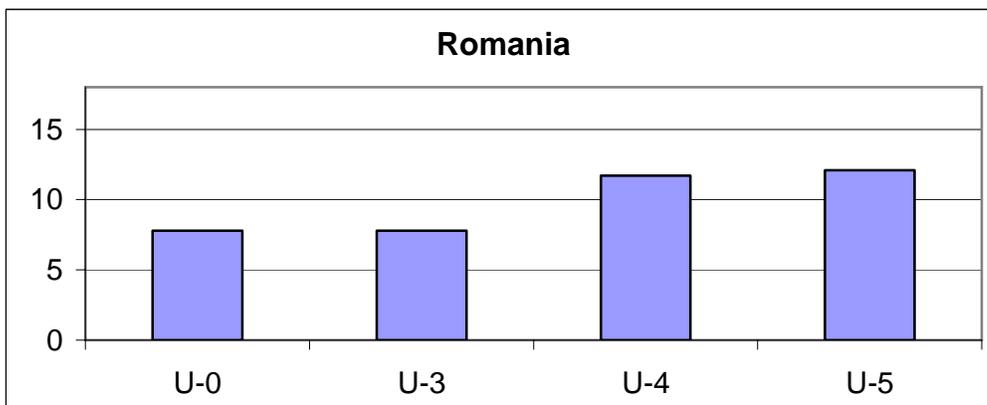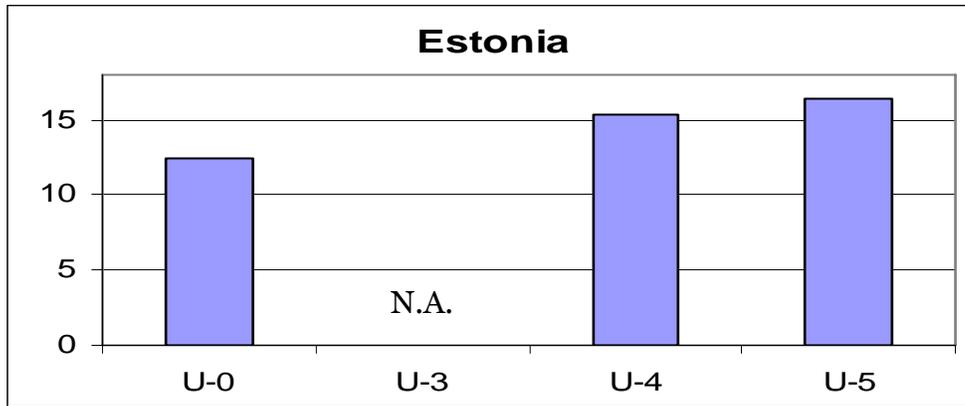| rate		Estonia		Romania		Russia	
		1994	**2001**	**1994**	**2001**	**1994**	**2001**
U-0	Standard ILO	11.6	12.5	7.6	7.8	8.1	8.9
U-1	Long-duration unemployment	n.a.	9.4	2.8	4.0	5.8	6.1
U-2	Job loser	n.a.	7.2	4.5	4.7	3.9	2.7
U-3	BLS (including laid-off workers not searching and expecting recall)	n.a.	n.a.	8.4	7.8	8.2	n.a.
U-4	Adding discouraged workers	13.5	15.4	10.5	11.7	9.3	10.8
U-5	Including marginally attached workers for other reasons and half of involuntary part-timers	14.2	16.4	10.7	12.1	10.5	11.0

Notes: The official definition is U-0 in Estonia and Russia and U-3 in Romania. Except for U-0, the figures in this table were calculated by adapting the U.S. definitions (BLS, 2006). Long-term unemployed is defined as 15 weeks or longer in Estonia and Romania, but three months or longer in Russia. Marginally attached workers are defined as individuals who did not look for work either during the reference week or in the four weeks preceding the survey, but indicated that they want and are available for a job and have looked for work sometime in the prior 12 months. U-3 is unavailable in Estonia in 1994 and 2001 and in Russia in 2001 because of lack of information on expectation of recall; U-4 and U-5 for Estonia in both years and for Russia in 2001 are calculated under the assumption that there are no job losers expecting recall. n.a. = not available.

Figure 3: Alternative Measures of Employment-Population Ratio, 2001

Estonia

	E-0	E-1	E-2	E-3
	N.A.	57	56	55

Romania

	E-0	E-1	E-2	E-3
	59	46	40	40

Russia

	E-0	E-1	E-2	E-3
	63	58	57	57

Notes: E-0 = broadest definition, E-1 excludes subsistence farmers (both own-account workers and unpaid family helpers), E-2 excludes other own-account workers and unpaid family helpers in agriculture, E-3 excludes half of involuntary part-timers. The official definition is E-0 in Romania and E-1 in Estonia and Russia. n.a. = not available.

Figure 4: Alternative Forms of Labor Underutilization, 2001

Estonia

	U-0	U-3	U-4	U-5
value	~12.5	N.A.	~15.5	~16.5

Romania

	U-0	U-3	U-4	U-5
value	~8	~8	~12	~12

Russia

	U-0	U-3	U-4	U-5
value	~9	N.A.	~11	~11

Notes: U-0 = Standard ILO definition, U-3 = BLS definition (includes laid-off workers not searching and expecting recall), U-4 includes discouraged workers, U-5 includes marginally attached workers for other reasons and half of involuntary part-timers. The official definition is U-0 in Estonia and Russia and U-3 in Romania.

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