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# THE ANALYSIS OF RE-EMPLOYMENT PROBABILITIES FOR THE UNEMPLOYED IN UKRAINE

This paper presents the results of an econometric analysis of the conditional probability of an individual leaving unemployment in Ukraine. Individual-level data are used from the first wave of the Ukrainian Longitudinal Monitoring Survey (ULMS-2003) to determine factors affecting re-employment probabilities between 1997and 2003 in a competing-risks discrete-time semiparametric framework. We test some basic hypotheses originated from a job search theory on the influence of individual-specific and local labor market characteristics on the hazard ofleaving unemployment, as well as our hypothesis about disincentive effect of existence of incomefrom casual activities and subsidiaryfarming during long non-employment period and no effect of unemployment benefits with respect to transition from unemployment to a job. This paper shows that long-term unemployment remains an important issue in Ukraine even in stronger labor market conditions after economy's reversal, and that re-employment probability is very unevenly distributed among various subgroups of unemployed individuals.

#### Introduction

One of the most disturbing features of the Ukrainian labor market over the last decade has been the high incidence of long-term unemployment. According to the Ukrainian Labor Force Survey in 2003, on average about 984 thousands of persons (50.3 % of all unemployed) have been out of work and actively searching for it for more than a year (Table 1). And many others are at risk of becoming so.

A particularly worrisome development is that, despite high economic growth rates in Ukraine starting from the year 2000, the number of those without ajob for a long period and average unemployment duration are decreasing very slowly. The question then arises as to what causes these slow changes in the duration of unemployment spell. Is it simply that the number of vacancies in the individual's travel-to-work area is not sufficient to absorb all unemployed? Or are there other factors at work which may influence the individual's probability of receiving a job offer and the probability of accepting this offer? Does the Ukrainian unemployment insurance system discourage quick exits to employment or some other factors come into effect instead? These are the questions we attempt to answer in this paper whereby filling a gap in the literature on the determinants of unemployment duration in Ukraine<sup>1</sup>.

<sup>1</sup> Extensive review of the studies on the determinants of unemployment duration and labor market transitions in the CEE countries and Russia can be found in Svejnar 11]. Devine and Kiefer |2| provide an overview of analogous studies in Western Europe and the US.

Indicators	2000	2001	2002	2003
Number of unemployed, who were searching for a job or were				
planning to start business, thds.	2628.7	2431.3	2204.3	1965.3
Percentage of those searching for a job or planning to start business				
by duration of their job search				
less than 1 month	3.1	3.0	2.7	3.1
1-3 months	10.1	11.0	12.4	13.8
4-6 months	11.0	11.0	11.6	12.8
7-9 months	12.2	10.1	10.0	10.5
10-12 months	13.1	10.1	9.8	9.5
more than 12 months	50.5	54.8	53.5	50.3
Average duration of job search, months	10	10	10	9
Average duration of non-employment, months	23	23	22	22
Average duration of registered unemployment, months	11	9	8	7

Source: Derzhkomstat, LFS (except for information on duration of registered unemployment)

### Methodology

The typical framework used in the empirical analysis of unemployment duration is the job search approach presented in Mortensen [3] and Mortensen and Pissarides [4]. The focus in modelling duration of unemployment is usually on the conditional probability of leaving unemployment, the hazard function<sup>1</sup>. The theoretical model of job search in a two-state labor market (employment and unemployment) implies that when a worker becomes unemployed, the conditional probability of his reemployment in any time  $\lambda(/)$  is equal to the product of the probability of receiving a job offer  $\xi(Y)$  and the probability then of accepting this job offer  $\theta(?)$  determined by his/her reservation wage:

$$\lambda(/) = \xi(t) \theta(t),$$

or, more generally,

$$\lambda(t) = \lambda(X(t), t),$$

where A' is a vector of characteristics which in a general model can vary with unemployment duration t. The variables which are liable to affect the probability of an individual leaving unemployment include local labor demand conditions, measures of individual's human capital, demographic characteristics and health status, housing tenure, variables measuring various aspects of labor market experience prior to entering the unemployment spell, labor market status of spouse, income while unemployed and expected income in work, etc. [2].

It is worth also briefly considering what relationship between the duration of unemployment and the probability of finding a job we might expect. The basic job search theory predicts that the distribution of unemployment durations is exponential, and the probability of finding a job is independent of completed duration if all explanatory variables are time-invariant. According to the more general models, the re-employment hazard may be negatively associated with the duration of unemployment spell (negative duration depen*dence*) if, for example, discouragement effect takes place (the individual's search intensity declines as the unemployment spell lengthens if he perceives his re-employment prospects as hopeless), or because of human capital decay during long period out of regularjob, or because employers are likely to screen unemployed individuals applying for a job on the basis of their non-employment duration, etc. [7]. On the other hand, it may be positively associated with time in unemployment (positive duration dependence) if so-called resource effect takes place when the reservation wage is declining with unemployment duration. The reservation wage may decrease, for example, as exhaustion of unemployment benefits approaches (so-called unemployment benefit exhaustion effect) implying that the probability of re-employment rises until the point when benefits lapse, but the empirical evidence on this relationship is found to be ambiguous [2]. Therefore, there are a variety of potential influences, one group of which implies negative duration dependence, while the other points to positive duration dependence. This suggests that it is preferable not to pre-impose particular shape on the hazard function.

<sup>&</sup>lt;sup>1</sup> Conditional probability of having a spell of length exactly/is a probability of leaving in tiny interval of time  $|t, t+\Delta t|$  conditional on survival up to time /. For comparison, the unconditional probability of having a spell of length exactly / is a probability of leaving a state in the interval  $|t, t+\Delta t|$  (see Kiefer [5]; Lancaster [6], for more details on duration models).

The econometric model adopted in our study is Cox proportional hazards model [8]:

$$\lambda_i(t) = \exp(\beta' X_i) \lambda_o(t) ,$$

where X. — is a vector of explanatory variables for individual i (we assume that all variables are time-invariant),  $\beta$  — a vector of parameters to be estimated, and  $\lambda_{\rho}(i)$  — the "baseline" hazard at time *t* which captures duration dependence of the hazard<sup>1</sup>.

If durations are measured in terms of whole months completed *(interval-censored data),* an observed duration of t whole months indicates duration on the continuous-time scale of between  $r^1$  and t + 1 months. According to Meyer [10], if there are no time-varying variables or if the value of timevarying variables is constant between t and t + 1, the probability of a spell being completed by time t+1 conditional on that it was still continuing at time t, the discrete-time hazard, can be written in the complementary log-logform as follows:

$$\lambda_{i}(t) = 1 - \exp\left[-\exp(\beta' X_{i} + \gamma(t))\right],$$
  
where  $\gamma(t) = \ln\left[\int_{t}^{t+1} \lambda_{0}(u) du\right]$  is some functional

form which summarizes the pattern of duration dependence in the discrete time hazard. We prefer a flexible specification of the baseline hazard since it allows for non-monotonic variation with duration, and therefore a wider range of possible effects of duration on the hazard rate can be captured [10, 11]. The shape of the baseline hazard is estimated in our model on a month by month basis without any restrictions on how  $\gamma$  can vary from interval to interval. In other words, we employ a flexible parametric (semiparametric) proportional hazards model: the baseline hazard is non-parametric while the effect of covariates takes a particular functional form.

In this study we distinguish between two destination states of exits out of unemployment (competing risks): unemployment can end with finding a regularjob or with a spell of economic inactivity. Following the assumption made by Narendrenathan and Stewart [12] for interval-censored I data, that exits from unemployment can only occur at the interval boundaries and that risks are independent, the overall independent competing risks I model simplifies to two or more single-risk models I analogous to that for continuous time data<sup>2</sup>. Toestimate the two risks separately, exits from unemployment to inactivity are considered censored when estimating exits to employment, and vice versa.

Finally, to allow for unobserved heterogeneity we extend our model introducing agamma-distributed random variable in each of the destinationspecific hazard and assuming again the independence across terms.

# Data

The data employed to analyze the probability of leaving unemployment in Ukraine are taken from the first wave of the Ukrainian Longitudinal Monitoring Survey (ULMS)-2003, a nationally representative random sample of the population of Ukraine living in private households in the spring of 2003. It has information about 4,056 households and 8,641 individuals aged from 15 to 72. The ULMS data set is a unique one in Ukraine since it is the first data set available at the individual level in Ukraine and it allows making an analysis of the labor market flows and unemployment duration from December 1997 till the reference week in 2003 owing to its retrospective nature.

Our sub-sample consists of individuals with at least one unemployment spell between December 1997 and June 2003 who provided complete responses to the questions about the period of job search. As a result, we have 2122 unemployment spells, experienced by 1799 individuals, with the average number of unemployment spells of 1.18 and its maximum number of  $5^3$ . We distinguish the following three types of unemployment spells by destination states:

- *exit to employment* if a respondent has found a job (or started his business) after a period of job search,
- *exit to inactivity* if a respondent has stopped job search, and

<sup>1</sup> The proportional hazards model assumes that absolute differences in explanatory variables result in proportionate differences in the hazard at each/19].

<sup>&</sup>lt;sup>2</sup> An alternative assumption for the discrete-time competing risks model can be found in Han and Hausman [11].

<sup>&</sup>lt;sup>3</sup> In our study, a person is classified as unemployed if: 1) he/she answered that he/she didn't have a job (including entrepreneurship, business activities, individual work, work in a family enterprise or on a farm, and freelance work) at some time period in the past; 2) a person gave the reason of not having a job and answered that he/she was seeking and available for work for any time during that nonemployment period; 3) there is no overlapping in time between the period of employment and the period of non-employment according to respondent's answers (if there was such overlapping we reclassify this person as employed).

• *right-censored if the* period of job search has been continuing at the date of an interview.

Our "dependent" variable is the length of an unemployment spell defined as the number of whole months between the date of beginning of job search (month and year only) to the date of its  $end^1$ . To each unemployment spell experienced by a sample member we have attached a vector of demographic and other individual characteristics (including gender, age, marital status and number of small children, education, sources of subsistence during unemployment, previous labor market status, previous unemployment experience), the values for which are determined at the starting date of the unemployment spell to ensure their exogeneity. In addition to individual characteristics, we use variables to account for differences in local labor demand conditions. Differentials in the local labor markets are proxied in our study by regional unemployment rate (accounting for between-oblast differences) and the type of settlement (accounting for within-oblast differences). We have matched in the registered unemployment rate by the quarter of starting date of unemployment and by the region (24 oblasts, Kyiv City and Crimean Republic) where the person lived at the beginning of the corresponding unemployment spell<sup>2</sup>. Finally, we add the year and the quarterofentering into unemployment to control for changes in macroeconomic environment and possible seasonal effects.

#### **Empirical results**

Table 2 provides the estimates of competing-risks complementary log-log model with fully flexible nonparametric baseline hazard<sup>3</sup>.We also estimate the models allowing for unobserved heterogeneity (gamma distributed) but the variance of the heterogeneity is not significantly different from zero as for exits to employment as for exits to inactivity implying that explicitly modeling unobserved heterogeneity changes the covariates little<sup>4</sup>. Given this, we present our final estimation results without accounting for unobserved heterogenity. \\fe focus here on exit from unemployment to ajob as the risk of interest. The results for the re-employment hazard using the competing-risks framework are given in the second column of Table 2.

 Table 2. Duration Analysis of Exits from Unemployment in Ukraine — complementary log-log model with nonparametric baseline hazard in a competing risks framework

Variable	Unemployment spell ends with move to:				
	Emplo	yment	Economic inactivity		
Female	-0.087	(0.096)	0.151	(0.182)	
Married <sup>a</sup>	0.297**	(0.104)	0.001	(0.196)	
Female*Married	-0.292*	(0.134)	0.024	(0.241)	
Number of children of 15 years old or under	-0.078	(0.066)	-0.274	(0.146)	
Female* children	0.107	(0.084)	0.217	(0.168)	
25-39	-0.419**	(0.089)	-0.071	(0.173)	
40-54	-0.627**	(0.097)	0.491**	(0.167)	
>55	-1.123**	(0.215)	1.137**	(0.237)	
Education <sup>c</sup>					
General secondary or vocational	0.047	(0.094)	0.046	(0.157)	
Professional secondary or unfinished higher	0.139	(0.107)	0.146	(0.168)	
Higher	0.375**	(0.124)	0.009	(0.212)	

<sup>1</sup> The minimum length of the periods fixed in the ULMS is one month. If, for instance, there was a period of less than a month between leaving one job and starting a new one, this period is not reflected in the questionnaire as a separate period of unemployment. <sup>2</sup> The information about characteristics of regional registered labor markets is taken from the Public Employment Center. We use

information on registered unemployment rather than unemployment from the LFSs because of consistency in methodology and completeness of information at the quarterly basis by regions for the former indicator in contrast to the latter.

<sup>3</sup>We have examined also the effect of religion, nationality, health status, the number of dependants younger than 15 or older than 75 in the household, previous employment status, sector of previous employment (according to the NACE classification), last occupation before unemployment spell (according to the ISCO classification), real net wage in the last job before unemployment, and national unemployment rate (controlling for macroeconomic climate) but these factors appear to be not significant, and our main results are robust to the inclusion of these additional variables. We have re-estimated also the regressions using the most recent spell of unemployment for persons who experienced multiple spells during the sample period or using sub-sample consisting of those who experienced unemployment only once during the sample period. These results don't change our main conclusions and are available on request.

<sup>A</sup> The empirical work of Meyer [10] and others suggests that when the baseline hazard is fully flexible, failure to model explicitly distribution of unobserved heterogeneity does not seriously bias results.

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Sources of Subsistence during unemployment				
Unemployment Benefits	0.029	(0.080)	0.131	(0.144)
Casual Work	-0.269**	(0.075)	0.156	(0.123)
Household Income	-0.249**	(0.091)	0.360*	(0.152)
Pension	-0.553**	(0.140)	0.342*	(0.173)
Other State Transfers	-0.105	(0.104)	0.060	(0.171)
Other Sources of Subsistence	0.329*	(0.145)	-0.182	(0.292)
Regional UR "	-0.073**	(0.023)	-0.054	(0.037)
Type of settlement <sup>r</sup>				
Town	0.086	(0.073)	-0.345**	(0.132)
Large city	0.267**	(0.091)	-0.256	(0.173)
Previous unemployment <sup>s</sup>				
1 prior spell	0.110	(0.107)	0.081	(0.200)
2 prior spells	-0.127	(0.343)	0.312	(0.521)
3 or more prior spells	0.618	(0.367)	0.996	(0.844)
Previously employed <sup>h</sup>	-0.103	(0.082)	-0.597**	(0.137)
Year ofstarting an unemployment spell				
1998	-0.100	(0.129)	0.501*	(0.236)
1999	0.102	(0.134)	0.812**	(0.262)
2000	0.165	(0.133)	1.029**	(0.257)
2001	0.198	(0.143)	1.240**	(0.291)
2002	0.298*	(0.149)	1.920**	(0.313)
2003	0.038	(0.255)	3.120**	(0.399)
Quarter of starting an unemployment spell				
П	-0.114	(0.107)	0.348*	(0.165)
III	-0.058	(0.100)	0.236	(0.178)
IV	0.079	(0.107)	0.343	(0.190)
Number of observations	36397 spell-months		35838 spell-months	
Number of failures	1099		369	
Log-likelihood	-4736.961		-1869.557	
Log-likelihood	-4736.961		-1869.557	

*Note:* Figures reported are the estimated coefficients. Robust standard errors adjusted for clustering on individual identifier in parentheses. \*\* and \* denote significance at the % and 5% levels, respectively. Variables are dummy variables except for regional unemployment rate, number of children, and female\*children." *Married*=1 iflegally married or cohabiting.\*Aged under 24 is the base category.<sup>6</sup> Primary or unfinished secondary-education is the base category.<sup>d</sup> *Unemployment Benefits* = 1 ifunemployment benefits or training allowance during unemployment; *Casual Work* = 1 if casual work or production and sale of products from own land plot or income from casual business activities or subsidiary farming for own needs; *Household Income* = 1 ifincome ofspouse or income of parents or support from relatives; *Pension* = 1 if pension; *Other State Transfers* = 1 ifstipend or study loan, child allowance, alimony, social benefits, subsistence allowance, or suppon by state or municipal institution; and *Other sources ofsubsistence* — 1 if sale of property, income from rent, dividends, etc., loans or savings.<sup>6</sup> Registered unemployment rate for 24 oblasts, Crimean Republic and Kyiv City. 'Village or small town is the base category.<sup>4</sup> No previous unemployment is the base category.<sup>6</sup> Previously inactive is the obase category. Exits to inactivity are considered censored when estimating exits to employment, and vice versa.

The results suggest that differences in hazards of exit to employment between men and women do not appear to be significant. Married women tend to have lower hazard rates from unemployment to employment although married individuals as a whole are more likely to leave unemployment to employment. This suggests that historically established pattern of family responsibilities in Ukraine is an important factor in the labor supply decisions. At the same time, the number of small children has no effect on the duration of unemployment. This finding may be partly attributed to the well functioning system of preschool and out-of-school education developed underthe Soviet Union with the aim of promoting women's labor force participation. The age coefficients suggest that the probability of exit from unemployment to employment decreases with age and that older worker are at a disadvantage in a rapidly changing economic environment. This result is consistent with job search theory and empirical evidence for many transition countries (see [13], [14] for Russia). The exit rate to employment increases with education, though only the coefficient on higher education is statistically significant: people with completed higher education have the hazard rate of exit to employment which is 45% higher than the hazard rate for the individuals with primary or unfinished secondary education, *ceteris paribus*. This finding is in the conflict with the effect of education on exits from registered unemployment in

The continuation of the Table 2

Ukraine found by Stetsenko [15]. We attribute this discrepancy to the difference in the composition of vacancies notified at the public employment service and those advertised in the newspapers and private employment agencies in Ukraine with the former heavily represented by vacations for less-educated and less skilled persons [16].

Our results support our hypothesis of no significant effect of receiving unemployment benefits implying that the existing unemployment benefit system is not contributing to longer unemployment spells. However, existence of other sources of subsistence during a period of unemployment such as income from casual work activities and subsidiary farming or household income or pension significantly lowers the probability of re-employment. This shows that such individuals are likely to search for regular jobs less intensively, they tend to have higher reservation wages and so they are probably more selective in accepting job offers. Surprisingly, people relying on income from dividends, rents, interests, savings, etc. tend to have significantly shorter unemployment spells. The observed positive effect maybe in part due to observed or unobserved characteristics which can explain stronger attachment of such individuals to the labor market (e.g. age, marital status, education, importance of employment status and fear of being unemployed and without money, etc.).

Other surprising result from our study is that previous labor market state before unemployment (as well as a sector of previous employment and employment status) and previous unemployment experience do not alter the probability of leaving unemployment to job. The only exception is the experience of three or more prior unemployment spells the coefficient on which is positive and marginally significant at the 10 % level. Our interpretation for this finding from the individuals' side is that individuals with many unemployment spells are more mobile on the labor market and can find the next job relatively easy, and that previously inactive persons may have lower reservation wage than those previously employed. It is difficult to interpret these results from the employers' side, but we guess that employers use other information as a signal of worker's productivity and reliability but not his labor market history.

The local labor demand variables proxied in our model by the regional registered unemployment rate and the type of settlement have the expected signs. The implied effect of a one percentage point increase in the registered unemployment rate is a 7.3 percent reduction in the hazard to job, *ceteris paribus*. The residents of large cities (more than 500 thousands of inhabitants) have higher probabilities to leave unemployment for employment than those living in the rural area or very small towns. This suggests that local labor market conditions are important determinants of exit to jobs. It follows that unemployment duration in a country might be lower iffewer barriers such as registration Oust a new name for the old system of *propiska*), high transportation and housing expenses existed for people to move to regions where labor market conditions were more favorable.

Finally, estimation results for he exits from unemployment to employment reveal that macroeconomic environment (proxied by the year of entering into unemployment) and the starting season of unemployment seem to be not important for the determining unemployment duration before reemployment. Only those who became unemployed in 2002 have significantly higher hazards of exit to jobs compared to the base group (those who entered unemployment in 1997). One potential explanation for non-response of unemployment duration to economic growth in Ukraine is that there are serious barriers between unemployed and job opportunities and that unemployment in Ukraine has at most structural character during the last years. Another potential explanation is that like in the CEE countries during the 90-s, production growth in the old sector absorbs first of all "hidden" unemployed who remain formally attached to a work place, while for the jobs created in the new sector unemployed have to compete with those still employed in the old sector [17].

As far as duration dependence is concerned, we cannot be sure of the extent to which the pattern we have found (with an increase in the hazard to job during the first year, its slight decrease during the next three years followed by its *sharp* but insignificant increase) reflects true duration dependence. For the moment, we would suggest that more attention should be paid to the exit rates corresponding to the several first months, since they are based on a more representative sample, but this issue certainly requires additional empirical assessment.

When we turn to the multivariate analysis of the factors affecting exits from unemployment to economic inactivity (third column in Table 2), several primary results emerge. First, there is no significant difference by education, gender, marital and family status, regional unemployment rate, and previous unemployment experience. Second, as expected, younger workers have a significantly smaller hazard rate to inactivity than both prime-age or older individuals. Third, individuals entering unemployment after employment appear to search longer before withdrawing from the labor force than individuals being economically inactive before unemployment. Fourth, we observe longer unemployment durations before withdrawing from the labor force for residents of small to medium towns compared to residents of rural area or very small towns, and no significant difference in unemployment durations between residents of cities and the latter. Finally, persons relying on household income and pension during unemployment are more likely to leave the labor force than persons without alternative income support since the former have less financial incentives to actively search for ajob and to work at all. Significant effect of presence of income from casual work activities with respect to the exit to employment accompanied with its insignificant impact with respect to the exit to inactivity indicates that various casual work activities mainly in the informal sector and subsidiary farming can be considered simply as survival measures taken by those who would prefer the stability of a formal regularjob but with a reasonable remuneration.

#### **Conclusions and policy implications**

This paper has analyzed the determinants of the probability that an unemployed individual in Ukraine finds a job or withdraws from the labor force using a new rich nationally representative data set from the Ukrainian Longitudinal Monitoring Survey. Given the absence of an effective system of public employment services and unemployment insurance in Ukraine, this study tries to identify other potential determinants of unemployment duration.

The fitted exit hazard in the semiparametric discrete-time formulation shows that there is a huge heterogeneity among unemployed in the sample. Our empirical analysis reveals that the social groups which tend to have significantly lower re-employment probabilities are married women and single men, older workers, individuals with primary or unfinished secondary education, residents of rural area and small towns (up to 20 thds. inhabitants), residents of oblasts with higher unemployment rate, individuals who receive alternative income from casual work activities and subsidiary farming or rely on household income or pension during a period of unemployment. It is important to stress also that according to our results there is no significant effect of receiving unemployment benefits, gender of an unemployed, number of small children in his family, and previous labor market state on the hazard of exit to employment. We unfortunately lack empirical evidence in order to judge for sure what factors are of the primary importance for explanation of stagnancy of unemployment in Ukraine but it seems that local demand constraints, measured by the regional unemployment rate and type of settlement, have the same or even lower importance now than the supply-side effects. Furthermore, according to our estimation results economic upturn in Ukraine during the last years ' appears to not influence the unemployment duration implying that a temporary shock in the early 90-s; has brought long-lasting effects in terms of high and persistent unemployment and that unemployment ] in Ukraine during the last years can be characterized as mainly structural.

Potential policy implications of the obtained results, however, are not really straightforward. On the one hand, for example, an obvious implication is to target active labor market policies on older workers, individuals with lower level of education, residents of rural area and small towns in the regions with higher unemployment. These policies may include specific skills training and retraining, recruitment subsidies, direct employment, provision of temporary public works, subsidies for moving to other territory, assistance and counselling of potential self-employed individuals. But on the other hand, with data at our disposal it is impossible to establish whether these programmes would be effective device to cope with the problem of long-term unemployment in Ukraine. Moreover, it should be taken into account that relatively small fraction of jobless individuals register with public employment center and so few of actually long-term unemployed are eligible for various active labor market policies which are provided by the Public Employment Service according to the legislation.

The next disputable policy implication follows from the disincentive effects of alternative income during unemployment (including income from casual work, subsidiary farming for own needs or for sale of grown products, household income and pension) on exits tojobs. At first sight on the estimated coefficients, it might be suggested to restrict the access to such income in order to shorten unemployment spells and boost outflows from unemployment to jobs. But after looking at this issue more carefully, we understand that we cannot put its control or elimination as a primary goal because this income is the main source of subsistence during a period of unemployment. Taking into account significant positive effect of pension on the hazard of withdrawing from the labor force after unemployment along with its negative effect on the hazard of re-employment it can be suggested to increase the level of pension in order to reduce the pool of longterm unemployed through increasing outflows from unemployment to inactivity among pensioners. As far as income from casual work activities and subsidiary farming is concerned, the issue of tackling long-term unemployment among those unemployed who rely on such income seems more chal-

lenging. Unfortunately, we cannot know for sure whether casual work or business activities in this case are really short-term and sporadic or they have systematic character; whether persons without formaljob attachment have chosen these informal activities in view of formal sector opportunities, or they have been forced to engage in casual work activities or subsidiary farmingjust to survive but they would have preferred a regular job. Since it is almost impossible to control and influence engagement into casual work activities directly, it would be more appropriate to apply employment intensive policies, aimed at encouragement ofpeople to move towards the formal sector, accompanied with active labor market policies targeted at those who experience particular difficulties in matching to a job. Furthermore, it is important that all policy decisions are based on welfare assessments, and it is

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not obvious what net welfare impact of controlling income during unemployment would be. As in the case of unemployment benefits, the desirable effects of different kinds of alternative income during an unemployment spell (more efficient individual-job matches and smoother consumption of households with unemployed members) should be traded off against the undesirable outcome of significantly larger unemployment duration with its all ensuing consequences. Establishing the magnitude of the net impact empirically, however, would require more rigorous assessment of reservation wages, nature and extent of casual work activities or subsidiary farming during a long unemployment period, and the quality of jobs after an unemployment spell (in terms of wages and employment duration), which is outside the scope of this study because of absence of the necessary data.

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# О. Купець

## АНАЛІЗ ІМОВІРНОСТІ ПРАЦЕВЛАШТУВАННЯ БЕЗРОБІТНИХ В УКРАЇНІ

Устатті представлено результати економетричного аналізу умовної ймовірності виходу індивіда зі статусу безробітного в Україні. Для визначення факторів, які впливають на ймовірність працевлаштування після періоду безробіття у проміжку часу між: 1997 та 2003 рр., за допомогою напівпараметричної моделі в дискретному часі з конкуруючими ризиками, використовуються індивідуальні дані першого раунду Українського довгострокового обстеження домогосподарств (УДО — 2003). Статистична перевірено низку базових гіпотез, які випливають з теорії пошуку роботи, вплив індивідуальних характеристик та умов на регіональних ринках праці на ризик виходу з безробіття, а також власні гіпотези про негативний ефект випадкових заробітків чи доходу з підсобного господарства й городів упродовж періоду незайнятості та незначущий ефект отримання допомоги по безробіттю на тривалість безробіття перед працевлаштуванням. Показано, що тривале безробіття залишається важливою проблемою в Україні навіть за умов покращення ситуації на ринку праці внаслідок зростання економіки, а ймовірність працевлаштування дуже різна серед різних підгруп безробітного населення.

<sup>1.</sup> Svejnar,/. Labor Markets in the Transitional Central and Eastern European Economies // Handbook of Labor Economics /0. Ashenfelter. D. Card (eds.).— Amsterdam: Elsevier Science, 1999.- Vol. 3B.- P. 2809-2857.