Do the rich stay unemployed longer? An empirical study for the U.K

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Do the Rich Stay Unemployed Longer? An Empirical Study for the UK[1]

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Abstract

This paper investigates the impact of individual asset holdings on the probability of leaving unemployment. According to the theory, higher levels of financial wealth will result in higher reservation wages and longer unemployment durations. I estimate the impact of beginning of period financial assets on the hazard rate, using data drawn from a UK inflow sample of the unemployed. The empirical findings indicate that individual asset holdings affect significantly the escape rate out of unemployment. In particular, negative levels of wealth increase significantly the hazard of leaving unemployment while positive levels of wealth reduce significantly the probability of leaving unemployment.

Keywords: duration analysis C41, unemployment duration J64.

1 Introduction

The literature on the relationship between financial assets and labour market transitions is very scarce. Assets play no role in the conventional job search model. The assumptions of perfect capital markets and risk neutrality rule out any influence of financial assets on the probability of leaving unemployment. Consequently, the job search literature has ignored the impact of asset holdings. However, the assumption of perfect capital markets appears rather restrictive.

[1] This paper draws on earlier research carried out at the European University Institute in Florence and at the Free University of Amsterdam. Earlier versions of this paper were presented at CREST, Paris, February 1994, at CentER, Tilburg University, May 1995, at the World Meeting of the Econometric Society, Tokyo, August 1995 and at University College London, December 1995. I thank for useful comments John Micklewright, Robert Waldmann, Hans Bloemen and Arthur van Soest. John Micklewright and Patrick Heady are to be thanked for having made the data available. All errors are mine.

Danforth (1979) showed that under the assumptions of utility maximization, decreasing absolute risk aversion, a limit to borrowing possibilities and a time preference rate as large as the market discount rate, the following three propositions hold (Danforth, 1979, p. 111):

- *"the rich are more selective"*, i. e. higher levels of wealth result in lower acceptance probabilities;
- *"the rich search longer"*, i. e. an increase in the level of wealth raises the expected duration of unemployment;
- *"the rich get richer"*, i. e. expected returns from search increase with increased search time.

Surprisingly, the issue has been ignored in the subsequent literature with few exceptions. Blundell et al. (1997) specify a discrete dynamic model where individual choose each period their consumption level and their labour market status with endogenous job offer and lay off rates. The job offer arrival rate is higher (i. e. the retention rate is higher) for individuals in work. In the model, savings can be used to smooth consumption. The authors show that individuals with levels of savings above a given threshold will not work. The model is not tested empirically but conditions for identification and data requirement are laid out.

Financial assets are absent from most empirical models of labour market transitions. Bloemen (1994) estimates the impact of assets on labour market transitions, using data from the Dutch Socio-Economic Panel. He finds some evidence of a negative relationship between savings and the probability of becoming employed. Bloemen and Stancanelli (1997) investigate the relationship between financial wealth, reservation wages and labour market transitions also using data from the Dutch Socio-Economic Panel. The authors conclude that individual wealth has a significantly positive impact on the reservation wage and a negative impact on the employment probability.

It is the purpose of this paper to test whether savings affect the hazard rate out of unemployment. One of the reason for the paucity of studies in this area is that models that explain simultaneously assets accumulation, consumption levels and labour market transitions are not easy to specify and to solve. Another reason is that data on assets are rarely reliable.

The approach followed here will be of an explorative nature. The impact of beginning of period assets on the hazard rate will be estimated, adopting a reduced

form approach. The data used are an unexploited UK dataset which contains detailed information on the asset holdings of the unemployed, the Survey of the Standard of Living of the Unemployed (LSUS).

The structure of the paper is the following. The data used for the analysis are described in Section 2. In Section 3, the model is specified. The results of estimation are discussed in Section 4. Conclusions are drawn in Section 5.

2 The data

The data used for the analysis are the Survey of Living Standards during Unemployment (LSUS). This is a longitudinal (inflow) sample of registered unemployment in Great Britain. The advantage of these data for the purpose of my analysis are the detailed questions asked on the financial situation of the unemployed.

The survey sample includes unemployed household heads, aged between 20 and 58 years, that entered unemployment in the summer of 1982 and stayed unemployed for at least three months[1]. I select men only for the analysis.

Two interviews were carried out with the sample participants: the first three months after the start of their (registered) unemployment spell; the second about 15 months later (about a year after the first survey interview). The interviews were conducted personally by the interviewers at the home of the survey participants. Detailed information on savings, debt and other individual characteristics was collected at the two survey interviews. Retrospective questions on the financial situation one month before the start of the unemployment spell were asked at the time of the first interview. Respondents were asked to check their financial balance statements.

I use information on the level of financial wealth before entry into unemployment. The savings of the unemployed are set equal to the sum of the amounts of money held under the following forms: bank current accounts; deposit or savings accounts; building society accounts; stock shares or other securities; premium bonds; any other savings. End-of-job payments received at about the start of the unemployment spell include redundancy payments and severance payments. These payments are added to the total savings[2]. The unemployed's debt is com-

[1] As a consequence of this last selection criterion, the sample is left-truncated at about three months from the start of the unemployment spell. This is easily dealt with when writing down the likelihood function, as it is done in the next Section.

[2] Sensitivity analysis with respect to the exclusion of end of job payments from net wealth in the estimating model is carried out in Section 4 (see Table 5).

puted summing up debt run under the following forms: money owed to friends or relatives; money owed to a money lender, a bank, a finance house, a credit card company, and any other person or organization; any arrears with mortgage payments and any other payments. Net wealth is computed as the difference between savings and debt[3].

The duration of the unemployment spell is constructed from retrospective questions on the economic activity week-by-week in the year between the first and the second interview, asked at the second interview. Therefore, only participants in both survey interviews are selected for the analysis. Attrition would only be a problem if non-response is associated with exit from unemployment. Some analysis of attrition excluded this possibility (Stancanelli, 1994).

Unemployment benefit is computed as the sum of unemployment insurance, unemployment assistance and housing benefit. Housing benefits are an important component of unemployment benefits in the UK. I allow the level of benefit to vary at the time of the exhaustion of unemployment insurance. I use information on the level of savings and on the spouse's labor force participation to predict unemployment insurance exhaustion. These variables determine entitlement to social assistance benefits in the UK[4].

The earnings variable relates to usual earnings in the job held one month before the start of the unemployment spell, if any. This information was not available for about 50% of the respondents. I use a dummy to control for the non-availability of the earnings information. Other income is equal to the sum of any other benefits accruing to the unemployed or their spouse and the earnings of the spouse, if any. The occupation dummies take value one if the unemployed's last job was respectively, in a "professional or intermediate" occupation or in an "unskilled"

[3] In the survey no information is available on the value of the house. However, information on house ownership outright or with a mortgage is collected. Therefore, I control for house ownership with a set of dummies.

[4] At the time the survey was carried out, savings above the threshold level of $3000 or a working spouse would prevent the unemployed from gaining entitlement to social assistance benefits. Unemployment insurance benefits lasted for 52 weeks. However, the maximum duration of entitlement to UB in a given spell of unemployment could actually be less than 52 weeks for some unemployed because of the so called "link spell" rule: unemployment spells separated by less than eight weeks of employment were counted together as single spells for benefit entitlement purposes. On the basis of retrospective information on the economic activity week by week in the year before entry into unemployment, collected at the time of the first interview, I did actually conclude that 91.2% of the sample was not interested by the link spell rule (Stancanelli, 1994). In Stancanelli (1997a), it is concluded that there is no significant expected benefit exhaustion effect in the UK, using the same dataset. This effect is therefore not modelled in the current study.

occupation. The base group for these dummies are the skilled and semi-skilled workers. I consider the following variables for age and family composition: age dummies, marital status dummy, a dummy for the presence of any child aged less than 5 in the nuclear family. The rate of unemployment in the local area (the county) is used to capture demand side conditions. At the time when the survey was carried out the aggregate unemployment rate averaged about 12-13% in Great Britain.

Descriptive statistics of the explanatory variables are given in Table 1 for the full sample and for the unemployed that reported, respectively, positive wealth, negative wealth and zero wealth. The following points are worth noticing.

There are more individuals with young children (less than five years old) among the unemployed with negative or zero wealth. The number of house owners outright is higher among the unemployed with positive levels of wealth. The number of house owners with a mortgage is instead larger among the unemployed with negative or zero wealth. The number of working spouses is smaller among individuals with negative and zero wealth. Interestingly, the proportion of unskilled workers is higher among individuals with zero levels of wealth than among the unemployed with negative or positive wealth levels. Similarly, professional or intermediate occupations are less represented among the unemployed with zero levels of wealth than among those with positive or negative levels of wealth. The number of house owners is smaller among the unemployed with zero levels of wealth. Fewer of those individuals with zero levels of wealth were in work in the week before entering unemployment. Average earnings are lower for the unemployed with zero level of wealth while the proportion of individuals that did not report earnings stays more or less the same across the three groups.

Overall, this evidence suggests that the unemployed with negative levels of wealth may have "better" characteristics than those with zero levels of wealth. Indeed, zero levels of net wealth, as opposed to negative wealth, may signal incapacity to borrow or to run debt. The unemployed with negative levels of wealth may have "better" characteristics than those with no wealth since they are able to run debt.

In Table 2, I show some descriptive statistics of wealth for different groups of the unemployed. Individuals with professional or intermediate occupations[5] have a mean level of net wealth of $4700, about six times larger than that of the unskilled workers ($858). House owners have a mean level of net wealth of $3173, six times as large on average than individuals living in rented accommodation. The

[5] The occupational group is constructed on the basis of the occupation in the last job.

unemployed on social assistance have a negative mean level of net wealth, equal to minus $178. Those on unemployment insurance with no social assistance[6] have a mean level of net wealth of about $4400. Individuals that received some severance or redundancy payments have a level of mean net wealth fourteen times larger than that of the other unemployed. Individuals with (past) earnings above the mean sample earnings have average net wealth equal to $3675 while individuals with earnings below the mean have average net wealth equal to $1011. Persons older than the average age in the sample have a considerably higher mean level of net wealth ($3288) than younger persons ($114).

3 The empirical model

The theoretical framework of the model is the theory of job search along the lines of the model put forward by Danforth (1979).

The probability of leaving unemployment is equal to the product of the probabilities of receiving a job offer and accepting it. Offers are characterized in terms of the attached wage. The acceptance probability depends on the reservation wage, which is that wage at which individuals are indifferent between continuing to search or accepting the job offer. Danforth's (1979) theoretical search model predicts a positive relationship between acceptance wages and asset holdings.

Here the probability of leaving unemployment is modelled with the hazard rate. Wealth is measured at the beginning of the period. In particular, wealth is measured one month before entry into unemployment on the basis of retrospective questions asked at the time of the first interview. According to the theory, wealth is expected to have a negative impact on the hazard rate by raising the reservation wage.

I model the hazard rate as a piecewise linear exponential. This is equivalent to the non-parametric specification adopted, for example, in Meyer (1990). Given some time periods, c_m, the hazard rate can be written as:

$$\theta(t) = \begin{cases} \lambda_1, & 0 \leq t \leq c_1 \\ \lambda_2, & c_1 < t \leq c_2 \\ \cdots & \\ \cdots & \\ \lambda_M, & c_{M-1} < t < \infty \end{cases} \tag{1}$$

[6] In the UK, the unemployed may receive social assistance payments on top of unemployment insurance if their resources including unemployment insurance payments fall below their needs on the basis of means-tests.

The baseline hazard specifies the hazard rate as a function of the time spent in the state of unemployment. I allow the baseline hazard to vary every two weeks. This should allow enough flexibility while at the same time ensuring that enough observations fall in each time period.

Other covariates are allowed to affect the hazard of leaving unemployment by entering the hazard rate model as follows:

$$\theta(t|x) = exp(x\beta)exp(\lambda_m), \tag{2}$$

$$c_{m-1} \leq t < c_m \quad m = 1, 2, \cdots, M$$

where β is a vector of parameters and the x's are covariates that are allowed to vary over time. In particular, the level of unemployment benefits varies over time. The survivor function conditional on left-censoring is:

$$G(t|x,s) = exp\{-\sum_m \delta(m,s,t)[exp(x\beta)exp(\lambda_m)]\} \tag{3}$$

$$c_{m-1} \leq t < c_m \quad m = 1, 2, \cdots, M$$

$$\delta(m,s,t) = \begin{cases} t - c_{m-1} \;\; if \;\; s < c_{m-1} \;\; and \;\; c_{m-1} \leq t < c_m \\ c_m - c_{m-1} \;\; if \;\; s < c_{m-1} \;\; and \;\; t \geq c_m \\ t - s \;\; if \;\; c_{m-1} \leq s < c_m \;\; and \;\; c_{m-1} \leq t < c_m \\ 0 \;\; otherwise \end{cases} \tag{4}$$

where s is the left truncation period, which is set equal to the time of the first survey interview and varies in practise between 11 and 17 weeks.

The likelihood function for the data is the following:

$$L = \prod_i \theta(t_i|x_i)^{d_i} \prod_i G(t_i|x_i, s_i) \tag{5}$$

where the "d" takes value one if individual i exits from unemployment and zero otherwise.

Allowing for unobserved heterogeneity the hazard rate can be written as:

$$\theta(t|x,v) = exp(x\beta)exp(\lambda_m)exp(v), \tag{6}$$

$$c_{m-1} \leq t < c_m \quad m = 1, 2, \cdots, M$$

and the survivor function conditional on left-censoring is:

$$G(t|x,s) = \int \{exp\{-\int_s^t \theta(u|x,v)du\}dH(v|x) \tag{7}$$

where H is the mixing distribution. I use a discrete finite mixing distribution. The likelihood contribution is equal to the density function for completed spells and the survivor function for right-censored spells. The model has been estimated in Gauss.

4 The results of estimation

I enter separately negative wealth, positive wealth and zero wealth. One would expect negative wealth to have a positive impact on the hazard rate and positive wealth to have a negative impact on the hazard rate. Individuals with zero net wealth should have stronger incentives to leave the pool of the unemployed.

Non-parametric Kaplan-Meier estimates of the survivor functions for individuals with, respectively, positive, negative and zero levels of wealth are plotted in Figure 1. The survivor function for individuals with zero level of wealth lies above those of individuals with negative or positive levels of wealth. This suggests that individuals with zero levels of wealth have lower hazard rates at any point in time. The two survivor functions for the unemployed with negative levels of wealth or positive levels of wealth are very close to each other. This result may be explained by the fact that non-parametric estimates do not control for individual (observed) characteristics.

Results of estimation of the piecewise exponential hazard rate model are presented in Table 3. The preferred specification is model (3) where unobserved heterogeneity is controlled for. Model (2) is the same as model (3) without controls for unobserved heterogeneity. The estimated parameters are larger in absolute values when unobserved heterogeneity is controlled for.

Negative levels of net wealth have a significantly positive effect on the hazard rate. In particular, an increase (in the absolute value) of negative net wealth of 100% raises the hazard of leaving unemployment by 5.7%, at the mean value of negative net wealth. Positive levels of net wealth have a significantly negative effect on the hazard rate. In particular, an increase in positive net wealth of 100%, reduces the hazard of leaving unemployment by 10.9%, at the mean value of positive net wealth. The unemployed with zero levels of net wealth have significantly lower chances of leaving unemployment.

The other explanatory variables in the model have the expected sign and are mostly statistically significant. Generally the results are in line with those of previous UK studies. In particular, my results compare reasonably with the findings of Arulampalam and Stewart (1995) who estimated the hazard of leaving unemployment for two different cohorts of UK unemployed, surveyed respectively in 1978 and 1987.

In my preferred model (3), the elasticity of the hazard rate with respect to the level of unemployment benefit is equal to -0.012. If the benefit increases by 100% the hazard of leaving unemployment will fall by 1%. This is a very small effect which is, however, probably explained by the high level of unemployment (about 12-13%) at the time the survey was carried out. Arulampalam and Stewart (1995) find an insignificant benefit effect for the 1987 cohort of the unemployed but a a significant benefit elasticity of -0.38 for the 1978 cohort. As the authors point out, these results are likely to be explained by the behaviour of the unemployment rate in the UK, which was very low in 1978 and started increasing thereafter.

The local rate of unemployment has an estimated coefficient of -0.029 which is very close to the estimated coefficient in Arulampalam and Stewart (1995), -0.025 for the 1987 cohort and -0.021 for the 1978 cohort. The elasticity of the hazard with respect to the level of previous earning is 0.72. Arulampalam and Stewart (1995) find an elasticity of 0.55 for the 1987 cohort and of 0.73 for the 1978 cohort. The estimated coefficient on the dummy for no previous earnings indicates that individuals for whom previous earnings were not available have significantly higher chances of leaving unemployment. This is explained by the fact that this dummy captures the situation of new entrants into the labour market. Unskilled workers and older workers have significantly lower chances of leaving unemployment.

The estimated baseline hazard from Model (3) is plotted in Figure 2. The baseline hazard starts at week 12 of the unemployment spell because of the left truncation of the sample. The behaviour in the first piece of the baseline is influenced by the small number of observations that fall and or exit in that duration interval[7]. There is some evidence of positive duration dependence. This pattern is in line with the findings of Arulampalam and Stewart (1995). The hazard rate for the 1978 cohort shows some positive duration dependence from week 10 onwards. The hazard rate for the 1987 cohort is quite smooth over time —and in this respect

[7] The reader is reminded that because of the sample design individuals with unemployment spells shorter than about 3 months (the time of the first sample interview) were dropped from the sample. Individual left truncation periods vary between 11 and 17 weeks.

more similar to the hazard rate for the LSUS sample— and it shows some slightly negative duration dependence until about week 40 of unemployment. For both 1978 and 1987 cohorts there is evidence of positive duration dependence from week 40 onwards.

A quadratic specification in negative and positive levels of wealth (Model 1 of Table 3) was rejected against a linear specification ($\chi^2_2 = 1.172$). Spline functions in net wealth have also been estimated with different cutoff points, at the quartiles, at zero, negative and positive levels of net wealth. Under all specifications of the spline function, the coefficient on the last segment of the spline was always significantly negative. The last segment of the spline function includes in all specifications (net) savings above the threshold level that regulates entitlement to social assistance benefits. However, since the results of estimation were generally very sensitive to the choice of cutoff points, my preferred specification remains model (3).

Excluding end of job payments from (positive) net wealth (case (a) Table 5) does not change substantially the results of estimation. The estimated coefficients on negative and positive wealth are still significant and have the expected sign. However, they are slightly smaller in absolute value. The same conclusions can be drawn if also the dummy for the receipt of any redundancy or severance pay is dropped from the model (case (b) Table 5) —the end-of-job payments dummy was not significant in either models (2) or (3). Not much changes either when end-of-job payments are entered in levels in addition to being included in net wealth (case (c) Table 5). Dropping the dummy for the presence of a working spouse in the household (case (d) Table 5) has almost no effect on the estimated net wealth parameters. Adding controls for the receipt of social assistance payments (case (e) Table 5) leaves the estimated effect of net wealth on the hazard almost unchanged. In this last case, the inclusion in the model of a dummy for the receipt of social assistance benefits cannot be rejected on the basis of a likelihood ratio test ($\chi^2_1 = 11.34$). However, this variable is not included in the preferred model since the UK literature on unemployment duration has opted for ignoring this issue[8].

On the basis of the estimated parameters from model (3), I have computed predicted mean unemployment durations for different levels of net wealth (Table 4). In the simulations carried out the explanatory variables are set equal to their mean and only the level of wealth is allowed to vary. The expected mean duration of unemployment is the shortest for the unemployed with net wealth levels equal to the mean of negative net wealth. Instead, the expected mean duration is the longest

[8] An exception is Stancanelli (1997b) to which the reader is referred for more details.

for the unemployed with zero wealth. Increasing by 100% the level of wealth at the mean of positive net wealth increases the duration of the unemployment spell by one week. Increasing by 100% the level of wealth at the sample mean of net wealth increases the duration of the unemployment spell by half a week.

5 Conclusions

In this paper, I have investigated the impact of asset holdings on the individual probability of leaving unemployment. The literature on the issue is scarce. The theory (Danforth, 1979) predicts that higher levels of financial wealth will result in higher reservation wages and longer unemployment durations. The approach followed in this paper is empirical and of a reduced form nature.

One of the interesting features of this paper is that use is made of an unexploited UK dataset which contains detailed information on the asset holdings of the unemployed, the Survey of the Standard of Living of the Unemployed (LSUS). In particular, these data relate to an inflow sample of the unemployed. This allows me to estimate the impact of financial wealth on the hazard rate. Wealth is measured at the beginning of the period.

In the sample, individuals with professional or intermediate occupations have a mean level of net wealth about six times larger than that of the unskilled workers. House owners have a mean level of net wealth six times as large on average than that of individuals living in rented accommodation. The unemployed receiving social assistance have a negative mean level of net wealth. Those on unemployment insurance with no social assistance have a mean level of net wealth of about 4400 $. Individuals that receive some severance or redundancy payments have a level of mean net wealth fourteen times larger than that of the other unemployed.

I enter separately negative wealth, positive wealth and zero wealth in the hazard rate model. According to the theory, wealth is expected to have a negative impact on the hazard rate. Therefore, one would expect negative wealth to have a positive impact on the hazard rate and positive wealth to have a negative impact on the hazard rate. Individuals with zero net wealth should have stronger incentives to leave the pool of the unemployed.

On the basis of the estimation of the model, the following conclusions can be drawn. Negative levels of net wealth have a significantly positive effect on the hazard rate, as expected. In particular, an increase (in the absolute value) of negative net wealth of 100% will increase the hazard of leaving unemployment by 5.7%, at the mean value of negative net wealth. Positive levels of net wealth

have a significantly negative effect on the hazard rate. An increase in the level of positive net wealth of 100%, will reduce the hazard of leaving unemployment by 10.9%, at the mean value of positive net wealth.

Zero net wealth is found to reduce considerably the hazard rate of leaving unemployment. This is likely to be explained by the fact that the unemployed that are not able to borrow or to save may have negative individual characteristics which are also associated with low offer probabilities. Indeed, the proportion of unskilled worker is twice as large among the unemployed with zero levels of wealth than among the unemployed with positive or negative wealth and previous wages are on average lower for the unemployed with no wealth.

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Table 1: Descriptive Statistics

Variable	*All*	*Net Wealth* > 0	*Net Wealth* < 0	*Neth Wealth* $= 0$
	Mean (SD)	*Mean (SD)*	*Mean (SD)*	*Mean (SD)*
Left Truncation	*13.40 (1.05)*	*13.39 (1.03)*	*13.39 (1.02)*	*13.46 (1.14)*
U duration weeks	*47.21 (19.00)*	*46.20 (19.05)*	*47.07 (19.12)*	*50.01 (18.48)*
U duration weeks*	*34.33 (14.62)*	*34.54 (14.83)*	*34.01 (14.50)*	*34.36 (14.22)*
Completed Spell	*0.59 (0.49)*	*0.62 (0.48)*	*0.59 (0.49)*	*0.50 (0.50)*
Prof-Int Occ	*0.17 (.37)*	*0.20 (0.40)*	*0.16 (0.37)*	*0.09 (0.29)*
Unskilled Occ	*0.06 (0.24)*	*0.05 (0.22)*	*0.05 (0.21)*	*0.10 (0.30)*
Age 20–24	*0.13 (.33)*	*0.08 (0.28)*	*0.16 (0.36)*	*0.18 (0.39)*
Age 25-34	*0.33 (0.47)*	*0.27 (0.45)*	*0.40 (0.49)*	*0.35 (0.48)*
Age 35-44	*0.25 (0.43)*	*0.23 (0.42)*	*0.27 (0.44)*	*0.26 (0.44)*
Age 45-54	*0.19 (0.39)*	*0.24 (0.43)*	*0.15 (0.35)*	*0.15 (0.36)*
Age 55-58	*0.11 (0.31)*	*0.18 (0.38)*	*0.03 (0.16)*	*0.05 (0.22)*
Married	*0.86 (0.34)*	*0.86 (0.35)*	*0.89 (0.31)*	*0.83 (0.38)*
Spouse works	*0.25 (0.43)*	*0.32 (0.47)*	*0.22 (0.41)*	*0.14 (0.34)*
Any Child Aged < 5	*0.35 (0.48)*	*0.27 (0.44)*	*0.44 (0.50)*	*0.41 (0.49)*
Savings, in 100 $	*13.62 (56.25)*	*27.39 (78.46)*	*1.08 (5.32)*	*0.08 (0.92)*
Debt, in 100 $	*5.98 (27.35)*	*2.04 (9.18)*	*15.32 (45.28)*	*0.09 (1.12)*
End-of-Jobs Payments, in 100 $	*7.90 (31.81)*	*16.25 (44.24)*	*0.13 (1.09)*	*0.01 (0.26)*
Net Wealth, in 100 $	*15.54 (72.96)*	*41.60 (91.24)*	*-14.11 (44.37)*	*0.00 (0.00)*
Other HH Income, in $	*21.81 (25.09)*	*22.79 (27.06)*	*21.83 (23.45)*	*19.28 (22.34)*
House Owner	*0.37 (0.48)*	*0.47 (0.50)*	*0.34 (0.48)*	*0.17 (0.38)*
House with mortgage	*0.34 (0.47)*	*0.24 (0.43)*	*0.43 (0.50)*	*0.46 (0.50)*
County U Rate	*0.14 (0.03)*	*0.13 (0.03)*	*0.14 (0.03)*	*0.14 (0.03)*
Benefit, in logs, $	*3.70 (0.42)*	*3.64 (0.40)*	*3.77 (0.43)*	*3.72 (0.42)*
Earnings, in logs, $	*2.42 (2.25)*	*2.89 (2.21)*	*2.10 (2.23)*	*1.77 (2.15)*
Earnings, in logs, $*	*4.48 (0.45)*	*4.55 (0.41)*	*4.41 (0.47)*	*4.41 (0.47)*
Earnings dummy	*0.46 (0.50)*	*0.36 (0.48)*	*0.52 (0.50)*	*0.59 (0.49)*
In work week before	*0.60 (0.49)*	*0.63 (0.48)*	*0.61 (0.49)*	*0.49 (0.50)*
No Observations	*1941*	*939*	*630*	*372*

The Net Wealth variable is computed by summming savings to end of job payments and subtracting from that debt. The dummy variables take value one when the condition stated for each of them is satisfied. The earnings dummies take value one when the earnings level is not available. The first mean duration includes the right-censored observations. The second mean duration (*) is computed only over the completed spells. The logarithms are taken over the non-zero observations. "Earnings" indicates that the mean is computed for the non-zero earnings. The "spouse works" dummy relates to one month before entry into unemployment.*

Table 2: Mean Net Wealth for Different Groups

Group	*Cases No.*	*Mean*	*SD*	*Median*	*25%*	*75%*
Sample	*1941*	*15.54*	*72.96*	*0.0*	*-1.22*	*10.00*
Profess-Interm Occ	*323*	*47.30*	*145.49*	*3.0*	*-2.35*	*38.69*
Unskilled Occ	*117*	*8.58*	*33.10*	*0.00*	*-0.05*	*2.04*
Past Earn. > Mean Past Earn.	*362*	*36.75*	*109.31*	*5.02*	*0.00*	*35.12*
Past Earn. <= Mean Past Earn.	*688*	*10.11*	*31.83*	*0.01*	*-1.20*	*7.53*
Age > Mean Age	*881*	*32.88*	*100.75*	*3.20*	*0*	*34.00*
Age <= Mean Age	*1060*	*1.14*	*29.32*	*0*	*-2.04*	*1.60*
No End Job Pay	*1610*	*4.90*	*52.37*	*0.0*	*-2.08*	*2.00*
End of Job Pay	*331*	*67.30*	*121.18*	*29.28*	*12.12*	*73.83*
House Owner	*724*	*31.73*	*110.21*	*2.77*	*-1.50*	*30.18*
Not House Owner	*1217*	*5.91*	*31.99*	*0.00*	*-1.20*	*3.60*
Social Assistance	*1205*	*-1.78*	*35.10*	*0*	*-2.22*	*1.57*
U Insurance only	*736*	*43.91*	*103.61*	*7.00*	*0*	*46.10*
Married	*1677*	*15.62*	*72.16*	*0.00*	*-1.38*	*10.00*
Not Married	*264*	*15.07*	*78.03*	*0*	*-0.20*	*10.20*
Spouse Works	*488*	*21.22*	*70.11*	*2.15*	*-1.04*	*24.91*
Spouse Does Not Work	*1453*	*13.64*	*73.82*	*0.00*	*-1.26*	*5.57*
Net Wealth is measured in 100$.						

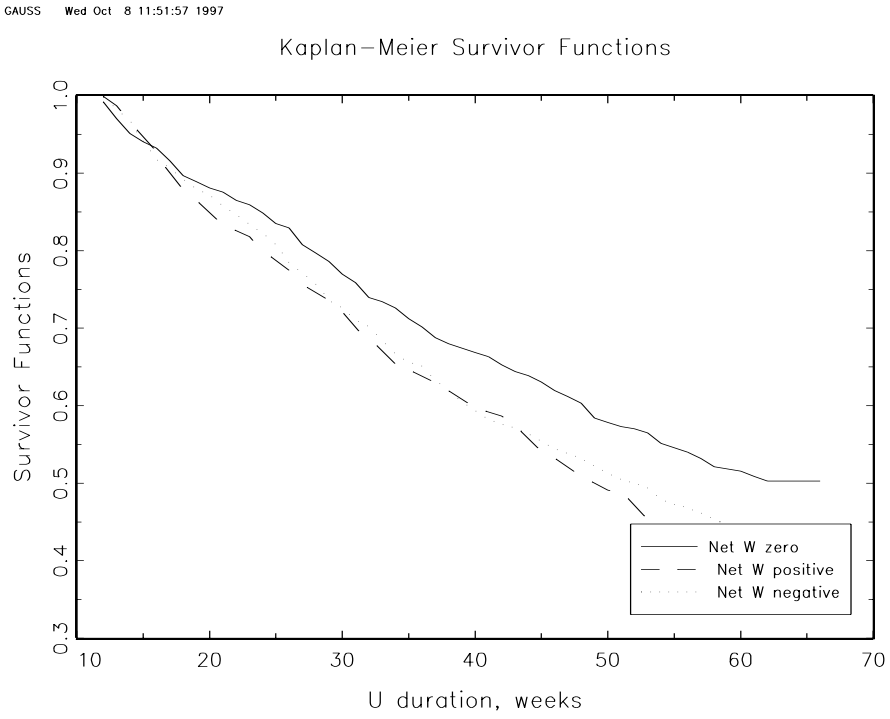
GAUSS Wed Oct 8 11:51:57 1997
Kaplan−Meier Survivor Functions
Survivor Functions
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
10
20
30
40
50
60
70
U duration, weeks
Net W zero
Net W positive
Net W negative

Figure 1:

Table 3: Results of Estimation

Variable	*Model (1)*		*Model (2)*		*Model (3)*	
Name	*Coeff*	*S E*	*Coeff*	*S E*	*Coeff*	*S E*
Unskilled Occup.	*-0.3842 **	*0.1548*	*-0.3827**	*0.1550*	*-0.6457**	*0.2255*
Age 30–34	*-0.1487*	*0.0986*	*-0.1480*	*0.0986*	*-0.1983*	*0.1344*
Age 35-44	*-0.2122 **	*0.1074*	*-0.2144**	*0.1075*	*-0.2667***	*0.1437*
Age 45-54	*-0.5795 **	*0.1203*	*-0.5858**	*0.1202*	*-0.8001**	*0.1650*
Age 55-58	*-0.9466 **	*0.1535*	*-0.9680**	*0.1511*	*-1.3637**	*0.2148*
Has any child	*-0.2010 **	*0.0799*	*-0.1988**	*0.0798*	*-0.2933**	*0.1095*
Married	*0.0550*	*0.1079*	*0.0543*	*0.1079*	*0.1362*	*0.1505*
House owner	*0.2528 **	*0.0682*	*0.2478**	*0.0680*	*0.3400**	*0.0938*
Earnings logs, $	*0.5235 **	*0.0918*	*0.5167**	*0.0917*	*0.7173**	*0.1208*
Prof.-Interm. Occup.	*0.3092 **	*0.0811*	*0.3038**	*0.0809*	*0.4299**	*0.1089*
County U rate	*-0.0202 **	*0.0095*	*-0.0202**	*0.0095*	*-0.0295**	*0.0130*
Earn. dummy	*2.3554 **	*0.4172*	*2.3221**	*0.4167*	*3.2463**	*0.5508*
Neg Net Wealth	*0.4726*	*0.3112*	*0.3432**	*0.1526*	*0.4091**	*0.1839*
Neg Net Wealth Squared	*0.0357*	*0.0887*				
Pos Net Wealth	*-0.2776 **	*0.1178*	*-0.1951**	*0.0602*	*-0.2622**	*0.0811*
Pos Net Wealth Squared	*0.0152*	*0.0169*				
No End-of-Job Pay	*0.0740*	*0.0969*	*0.0880*	*0.0944*	*0.0952*	*0.1268*
Zero Net Wealth	*-0.2781 **	*0.0844*	*-0.2690**	*0.0837*	*-0.3695**	*0.1194*
Had Job Week Before	*0.1507 **	*0.0763*	*0.1528**	*0.0762*	*0.1917***	*0.1052*
Spouse Works Month Before	*0.2954 **	*0.0932*	*0.2968**	*0.0932*	*0.4347**	*0.1252*
Has Mortgage	*0.2000 **	*0.0667*	*0.2009**	*0.0667*	*0.3223**	*0.0919*
Other Household Income	*0.0015*	*0.0015*	*0.0015*	*0.0015*	*0.0011*	*0.0020*
Log U Benefit, tim var	*-0.0079**	*0.0026*	*-0.0078**	*0.0026*	*-0.0121**	*0.0034*
*Mass point**					*2.3265**	*0.2161*
*Parameter P**					*1.0730**	*0.2102*
Log-likelihood		*-5443.22*		*-5443.73*		*-5432.35*

The baseline hazard involves 27 parameters. The number of observations is 1941. Net Wealth is measured in 10000$. It also include end of job payments. Model (3) includes controls for unobserved heterogeneity by means of mass points. Two mass points have been introduced. The first is normalized to zero ($va = 0, exp(va) = 1$). The probability distribution of the mass points is specified as: $pva = 1/(1+exp(P))$; $pvb = exp(P)/(1+exp(P))$.

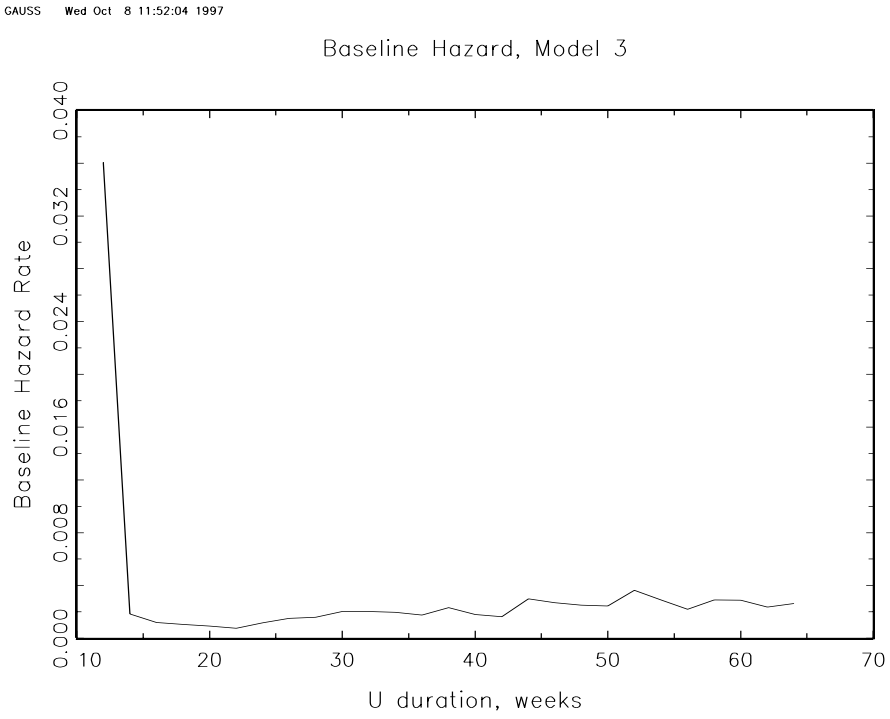
GAUSS Wed Oct 8 11:52:04 1997
Baseline Hazard, Model 3
Baseline Hazard Rate
0.000
0.008
0.016
0.024
0.032
0.040
10
20
30
40
50
60
70
U duration, weeks

Figure 2:

Table 4: Predicted Mean Unemployment Duration

Assumptions made	*Predicted Duration*
Net Wealth not included in the hazard rate model	*33.90*
Net Wealth equal to zero	*38.22*
Net Wealth equal to sample mean	*34.42*
Net Wealth equal to twice the sample mean	*34.94*
Net Wealth equal to half the sample mean	*34.16*
Net Wealth equal to mean value of positive net wealth	*35.29*
Net Wealth equal to twice the mean value of positive net wealth	*36.58*
Net Wealth equal to mean value of negative net wealth	*33.12*
The base model is model (2). The mean expected duration has been computed as $E(Umean) = \sum_{t=12}^{62} Gmean_t$ *where* $Gmean_t$ *is the expected mean survivor function, evaluated at the mean values of the explanatory variables.*	

Table 5: Some Robustness Checks

Model Restriction/Extension	*Neg Net W*	*Pos Net W*	*No Net W*	*No End-Job-Pay*	*Log-Lik*
Base Model	*0.34 (0.15)*	*-0.19 (0.06)*	*-0.27 (0.08)*	*0.09 (0.09)*	*-5443.73*
(a) End Job Pay excluded from wealth	*0.31 (0.15)*	*-0.15 (0.07)*	*-0.27 (0.08)*	*0.16 (0.09)*	*-5446.72*
(b) End Job Pay excluded from wealth and end of job pay dummy dropped from the model	*0.31 (0.15)*	*-0.15 (0.07)*	*-0.26 (0.08)*		*-5448.23*
(c) End of Job Pay is additionally entered in levels $(-0.24, 0.14)$ *and the Dummy is dropped from the model*	*0.34 (0.15)*	*-0.14 (0.07)*	*-0.26 (0.08)*		*-5442.80*
(d) Spouse Works Dummy dropped from the model	*0.33 (0.15)*	*-0.21 (0.06)*	*-0.28 (0.08)*	*0.07 (0.09)*	*-5448.72*
(e) Dummy for the receipt of Social Assistance Benefits added to the model (-0.26, 0.08)	*0.31 (0.15)*	*-0.21 (0.06)*	*-0.26 (0.08)*	*0.10 (0.09)*	*-5438.06*
The base model is the preferred model, model (3).					