Zentrum für Europäische Integrationsforschung
Center for European Integration Studies
Rheinische Friedrich-Wilhelms-Universität Bonn

Working Paper

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B 04
2001

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March 4, 2000

Abstract

While much empirical research has been done on the labour market consequences of unemployment benefits, there is remarkably little evidence on the forces determining benefits. The paper presents a simple model where workers desire insurance against the possibility of unemployment and unemployment benefits increase the unemployment rate. We then conduct, what we believe, is one of the first empirical analyses of the determinants of the parameters of the unemployment benefit system. Using OECD data for 1971-1989, controlling for year and country fixed effects, and controlling for the political colour of the government, we find evidence suggesting that benefits fall when the unemployment rate is high. This is consistent with the tax-effect described in Wright (1986) and Atkinson (1990). There is weaker evidence that benefits increase with positive changes in the unemployment rate, which may be proxying for the inflow rate and could be called an insurance effect.

JEL Classification: H53, J65.
Keywords: endogenous unemployment benefits, unemployment, politics.

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I. Introduction

Countries differ in the generosity of their unemployment benefit programs. Within each country the unemployment benefit programs change over time. Why? What are the causes of these differences? This paper provides an attempt at evaluating how much of these variations can be explained by economic and political factors. In other words, we attempt to study the determinants of unemployment benefits.

Although considerable attention has been paid to the growth of the welfare state measured by *total* welfare spending (e.g. Ram [1987], Roubini and Sachs [1989], *inter alia*) there appears to be no previous published empirical work on the determinants of an unemployed worker's benefit allowance. Most of the existing empirical papers related to unemployment benefits concentrates on the effects of benefits in unemployment regressions (e.g. Ehrenberg and Oaxaca [1976], Feldstein [1978], *inter alia*). This, and other related work, has been interpreted by some economists as indicating that an over generous welfare state is behind the poor economic performance of certain European countries. They favour benefit cuts as a cure for the unemployment problem. Yet a policy of cutting unemployment benefits to help the unemployed sounds paradoxical. It seems that before taking any macroeconomic policy actions we should conduct a more careful inquiry into the determinants of unemployment benefits.

This paper presents a simple model where workers desire insurance against unemployment, but where higher benefits require higher taxes (budget constraint) and bring about higher unemployment (incentive constraint). Using OECD data for 1971-89, we show how economic and political variables affect the parameters of the unemployment benefit system

To our knowledge, only two theory papers have looked before at the positive aspects of the determination of unemployment benefits.[1] In Wright [1986] the level of

[1] Following Feldstein's criticism of the incentive effects of benefits there have been considerable efforts on the normative side (see Baily [1978], Flemming [1978], Shavell and Weiss [1979], *inter alia*). Kiander [1993] derives the optimal unemployment benefit policy for a trade union when search matters, and shows that it is a decreasing function of the trade union's share of the costs of the insurance fund.

unemployment insurance is set by the employed majority. He predicts that a higher discount rate lowers the optimal level of benefits for the employed median voter. Both Wright [1986] and Atkinson [1990] show that the response of the employed majority to a higher unemployment rate may be to make the system less generous. Neither paper, however, takes into account the incentive effects of benefits (i.e. neither allows for a positive impact of unemployment benefits on the unemployment rate), an important feature of our model. A relevant paper presenting a normative analysis is Boadway and Oswald [1982]. They show how a government that has redistributive objectives may optimally intervene in the economy by providing unemployment benefits. Thus, the empirical prediction is that left-wing preferences of society, which presumably are correlated with a desire for income redistribution, will have a positive effect on benefits.

Our paper is related to the recent work of Rodrik [1998] (see also Cameron [1978]). He finds a positive correlation between a country's level of openness and the amount of government consumption. He explains it as follows: "*More open economies have greater exposure to the risks emanating from turbulence in world markets. One can view larger government spending in such economies as performing an insulation function, insofar as the government sector is the "safe" sector (in terms of employment and purchases from the rest of the economy) relative to other activities..."* (pg. 1011). He considers the objection that the government's risk reducing role would best be served by establishing a safety net, "*in which case it would show up mainly in government spending on social security and welfare, and not in government consumption"*. He shows evidence consistent with this view for "*advanced countries, which do have the administrative capacity to manage social welfare systems"* (pg. 1012). The evidence comes in the form of regressions of social security and welfare expenditures as percentage of GDP on openness and external risk (terms of trade instability). Two aspects of the link between risk and insurance remain to be established, however. First, from a theory point of view, it would be important to have more evidence on the channel through which the link operates. In other words, we would like to be sure that the measure of external risk of the country affects variables that capture the type of personal risks that people care about

(e.g. like falling unemployed). And also that the government's reaction involves a program that is related to that risk (e.g. like unemployment benefits). Second, and perhaps more importantly, the measure of social insurance Rodrik [1998] uses (social security and welfare spending over GDP) depends directly on the number of claimants which, in turn, may be affected by risk. That is, for a number of categories of social spending, the left-hand variable may not be independently defined from the right-hand variable.[2] Our paper comes closer to avoiding these problems by looking directly at the link between unemployment and the parameters of the unemployment insurance programs. Thus, we see our paper as complementing Rodrik's approach.

A potentially important application of the present paper has been pointed out by Blanchard and Katz [1997]. They suggest that the evidence presented here could be used to evaluate the relative importance of the channels through which hysteresis operates. If countries that experience shocks to the unemployment rate increase their level of unemployment benefits (depending on the political party that is in power), and if this increases the unemployment rate further, we may then have an explanation for why some countries' unemployment rates remain high for such prolonged periods of time. Some of the work of Saint-Paul on labour market flexibility is also relevant to the problems we discuss. A recent review paper (Saint-Paul [1996]) also looks at the determinants of unemployment benefits using a different specification and compares his results with those obtained in an earlier version of this paper.[3]

Section II outlines the model while Section III explains our empirical strategy and describes the data. Section IV presents the empirical results. Section V proposes three pieces of evidence that can be interpreted as supporting the hypothesis that

[2] An example clarifies this. Suppose a country experiences an exogenous shock that increases the unemployment rate. If an unemployment insurance program is in place, that year social security and welfare payments as a percentage of GDP will rise automatically because there are more claimants to the system. Furthermore, even if total payments have increased, the amount of insurance that people actually get will have fallen. The reason is that the cost of risk (the cost of falling unemployed) goes up with unemployment because expected duration increases.

[3] For example, he includes a different set of controls and uses a different sample. The working paper version of this paper is Di Tella and MacCulloch [1995].

unemployment benefits increase with positive changes in the unemployment rate. This section also provides direct evidence on the line of causality argued in the paper by examining the legal environment which defines benefit provision and a short case study based on historical evidence on the birth of the American welfare state. Section VI concludes.

II. A Simple Model

In this section we sketch a simple model to provide a motivation for the empirical section. Unemployment benefits are determined by the government, constrained by its financial possibilities and by labour market conditions, which we assume involve equilibrium unemployment.

The government's problem is to find the level of unemployment benefits, b^s, defined as

$$b^s = \arg\max_b \; W = f\,[(1-y)\,V^E + y\,V^U] + (1-f)\,V^F \tag{1}$$

such that

$$s = ub \qquad \textit{Budget Constraint} \tag{2}$$

$$u = m(b,\Omega) \qquad \textit{Labour Market Equilibrium} \tag{3}$$

where V^E and V^U are the lifetime expected utilities of an employed and an unemployed worker respectively, V^F is the value of firms (if we assume workers and owners of firms are distinct individuals), y and f are the welfare weights given by the government to the unemployed versus the employed, and between workers and firms, respectively (where $0 \pounds f \pounds 1$ and $0 \pounds y \pounds 1$) and u is the unemployment rate. Equation (2) is the budget constraint. It assumes that every employed and unemployed worker pays a tax, s, out of their gross income to support the welfare state. Equation (3) is the labour market equilibrium in which firms maximise profits at the point where their labour demand is equated to a "wage curve", so that the function $m(b,W)$ describes how benefits are related to unemployment and W is a vector of parameters (including the price of inputs, inflow

rate, etc.). The function *m(.)* could represent a variety of models of wage formation, such as efficiency wages or union bargaining models, where there is involuntary unemployment.

We focus on the Stackelberg equilibrium of the game where the government is able to commit to a level of benefits (e.g. through legislation) and firms subsequently set wages and employment to maximize profits. The (subgame) perfect Nash equilibrium of the Stackelberg game in which the government moves first is characterised by:[4]

$$b = b(u, \Sigma) \tag{4}$$

where S is a vector of parameters including the welfare weights, the rate of time preference and labour market conditions, including the inflow rate into unemployment and the expected duration of unemployment and other factors that affect the utility of the employed and the unemployed such as their different social status.[5] In general (provided firms' profits are a negative function of benefits), we find that as the welfare weighting of firms versus workers rises the government's choice of benefits will be lower. Comparative static results for other variables depend on the unemployment/benefit trade-off (these are shown in Appendix I).

To see the intuition behind those results, first assume that benefits do not affect unemployment. As long as the weight $y < u$, we do not have full insurance. The effect of a higher level of unemployment (due to an exogenous shock) on the level of benefits is ambiguous. On the one hand, higher unemployment means a higher tax burden for the

[4] Note the element of dynamic inconsistency: the government must be able to commit to the Stackelberg benefit level since, given the unemployment rate, it has a profitable deviation. Such extensions are important when dealing with practical issues on policy reforms, although are outside the scope of this paper. Results for the Nash equilibrium are available in our working paper.

[5] An interesting feature of the model is that we can define political ideology using economics: *A left wing political party is one that values more an extra util (in the social welfare function) achieved through extra insurance than an extra util achieved through lower taxes. The opposite is true for a right wing party.*

employed (so benefits would fall, as in Atkinson [1990]), but it also means that they should expect spells of longer duration if they were to fall unemployed (so they would like to see higher benefits). The appendix shows conditions under which the first effect dominates. A higher discount rate leads to lower benefits because the employed don't want to pay taxes now for benefits they will receive in the future, an effect already present in Wright [1986]. To the extent that a higher discount rate would increase the level of unemployment (as in some efficiency wage models), we would expect to find a negative tax effect that would reinforce the Wright effect, and a positive effect through longer expected duration (as the employed want better insurance).[6] Higher inflows, on the other hand, lead to higher benefits as the employed want more insurance. To the extent that inflows increase the unemployment rate, we would again expect to find a negative effect on benefits (because of the higher tax burden) and a positive effect because of the longer expected durations when the unemployment rate is higher.

The case when benefits increase unemployment is more complicated. A general point is that the unemployment costs of benefits mean there is not full insurance, even if $y=u$. Thus, now falling unemployed is more costly and any factor that increases the duration of unemployment has a more positive effect on benefits. Furthermore, reducing benefits has the advantage that, ceteris paribus, it reduces unemployment (hence taxes) and the expected duration of unemployment spells (for details see Appendix I).

III. Empirical Strategy and Data

The following linear form of equation (4) in Section II is estimated:

$$Benefits_{iT} = a\ Unemployment_{iT} + b\ Inflows_{iT} + g\ Right\ Wing_{iT} + d\ Time\ Preference_{iT} + h_i + w_T + e_{iT} \qquad (5)$$

[6] In a model where saving is allowed, a higher rate of interest (maybe because monetary policy is tight) may make individuals less willing to vote for a generous welfare state. This would happen if the return from investing the tax contributions becomes larger than the expected benefit from having benefits if one falls unemployed.

We control for both country (h_i) and time (w_T) fixed effects so the basic estimator is Least Squares Dummy Variables (LSDV). Our dependent variable (*Benefits*) is calculated as the pre-tax average of the unemployment benefit replacement ratios for two earnings levels, three family situations and three durations of unemployment (see Appendix II for the exact variable definitions). As an index, this summary measure is not necessarily close to the initial replacement ratio people are entitled to after losing a job, or to the average level of benefit currently received by unemployed people. It is *not* weighted, for example, by the composition of unemployment in each country and year. Importantly, since it covers a variety of typical cases (e.g. single, married with/without a dependent spouse) it is not prone to the weakness of other benefit data that do not reflect a common practice whereby cuts in one type of benefit are simply offset by a corresponding increase in another type.[7] Although our data still have a number of weaknesses (for example, there is no allowance for the fact that, in some countries, governments support the unemployed through subsidies linked to their previous employers rather than through benefits), we believe it represents a significant improvement over previously available benefit data.

One potential problem with the data is that they mix insurance payments with social assistance. The latter is typically not linked to previous employment and contributions to an insurance fund. In other words the logic of such payments may have more to do with reducing inequality than with providing insurance. We obtained the raw OECD data and constructed the average benefits paid out in the first year in unemployment and called it *Benefits Short*. We also calculated the average level of benefits for people who have been unemployed for more than three years. This variable is called *Benefits Long* and is presumably driven by a different economic logic than first year unemployment insurance. In fact the raw correlation coefficient between the two measures of benefit generosity is 14 percent. In the appendix we graph these three measures for five selected countries (US, Canada, United Kingdom, Germany and Ireland). *Benefits Short* and *Benefits Long*

[7] The OECD produced the data in 1994. They are available every two years, so we use two year averages for all the other variables used, and a period in equation (5) equals two years. Interpolating the benefit data would allow us to run regressions with 320 observations, although it may give the impression that we have more information than we actually do.

appear to behave very differently. The appendix also provides a brief description of the unemployment benefit programs in place in each country in a typical year. It shows that the primary component during most of the first year is an unemployment insurance system (the exceptions are Australia and New Zealand). The duration of this program varies across countries. It also shows that when one gets past the third year, the main component of unemployment compensation is unemployment and social assistance (notable exceptions are Belgium and France). Assistance refers to means-tested income support whereby the government acts to secure a minimum standard of living. See Appendix II.

The variable *Right Wing*, a measure of how far the political preferences of the government lean towards the right, proxies for both the relative power of firms over workers $1-f$, and of employed workers over the unemployed $1-y$. The variable *Right Wing* is similar to those employed by political scientists to indicate the left/right position of a government, and is constructed in two steps. In the first step, we collect the number of votes received by each party participating in cabinet and express them as a percentage of the total votes received by all parties with cabinet representation. This percentage of support is then multiplied in the second step by a left/right political scale (from Castles and Mair [1984]) and summed across all the cabinet parties to give a continuous variable. Workers' discount rate is proxied by the long run real interest rate paid by the government on long term bonds (*Interest Rate*), obtained from the *OECD Historical Statistics*. Budget constraint effects are captured by including the unemployment rate (*Unemployment*). An important limitation for our empirical efforts is the lack of suitable inflow data. Some regression specifications we will use can be reinterpreted so that the change in the unemployment rate (*DUnemployment*) acts as a proxy for the inflow rate. Appendix II (Tables A.I. and A.II.) presents the raw data and all data definitions.

IV. The Empirical Evidence

Regression (1) in Table I estimates a basic version of equation (5). It reveals a significant negative coefficient on the unemployment rate consistent with budget

constraint effects as described in the model in section II and earlier in Wright [1986] and Atkinson [1990]. The size of the coefficient predicts that an increase of 3.4 percentage points (one standard deviation) in the level of unemployment, ceteris paribus, reduces benefits by 1.9 percentage points or 14 percent of a standard deviation in benefits (-0.547*0.034/0.129). The coefficient on the real interest rate is positive, though the effect is only significant at the 10-percent level. Although multicollinearity is a potential source of concern, we note that this result stands in contrast to the predictions of models with no incentive effects of benefits – such as Wright [1986] and case I in Appendix I – and is what we expect in a model where higher benefits increase the unemployment rate – such as case II in Appendix I. Regression (1) reveals no significant effects of the political inclination of the government (*Right Wing*) on unemployment benefits (although the coefficient is negative, consistent with Boadway and Oswald [1982]).[8] Thus, controlling for economics, the basic evidence shows no effects of politics on benefit determination, which is perhaps surprising.

Regression (2) allows for a lag in the determination of unemployment benefits. Although our model does not consider such dynamics explicitly, it may be reasonable to expect some delay until political and economic changes affect unemployment benefits. A possible motivation is that legislators need to take notice of such changes or, in extreme cases, need to be replaced by individuals more sensitive to the new demands.[9] The results suggest this is largely the case. The coefficient on the unemployment rate is 52 percent larger in absolute value (i.e. more negative) than that in regression (1), while the standard error is of similar size. It is also economically significant. A one standard deviation increase in the unemployment rate is associated with a decrease in benefits of 2.8 percentage points one period later. This equals 22 percent of a standard deviation in

[8] The regression results look almost identical if *Right Wing* is excluded, and if estimation is by GLS random effects (Balestra-Nerlove), instead of LSDV. This section reports a number of results not included in the tables that are available upon request.

[9] In other words, we assume there is indirect democracy. Note that, because the data are available only for every two years, and a lag in these variables involve data from previous periods, we estimate effects of up to four years (i.e. within one legislative period). The average election in our sample occurs every four years.

benefits. There is still evidence of a positive effect of the interest rate, this time significant at the 5 percent level. The political inclination of the government is significant at the 10 percent level. A change in government equivalent to substituting Francois Mitterrand by Margaret Thatcher (equal to 3.5 standard deviations in the variable, *Right Wing*) is expected to bring about a reduction in unemployment benefits of 2.5 percentage points (or 20 per cent of a standard deviation in the benefits variable). Using these estimates it seems that changing Mitterrand for Thatcher is equivalent (in terms of benefits and other things equal) to increasing the unemployment rate by 2.9 percentage points.[10] To get a better feel for the relative size of these effects, note that in terms of one standard deviation, the politics effect is equal to 26 percent of the unemployment effect. Regression (3) presents a more general specification using current and lagged values with largely similar results.

Although our model does not lead us to believe that fiscal or income variables would have an independent impact on benefits, we check if our results are robust to the inclusion of such control variables. We include government debt over GDP and government deficit over GDP (from the IMF's International Financial Statistics) to control for the government's fiscal position. The main results are unchanged. For example, in a specification similar to regression (2), which also includes the debt and deficit variables, we find very similar results in terms of size, sign and significance. If we also include a country's GDP per capita (to see if there are "wealth" effects), the coefficient on *Unemployment (-1)* keeps it sign but falls (in absolute value) by almost 24 percent, and is significant at the 6 percent level.

Another potential objection to regressions (1-3) is that the unemployment effects may simply be capturing reverse causality. A large literature in economics has found positive effects of benefits in unemployment regressions, so a simultaneity bias may be present in the unemployment coefficient. The first thing to note is that the coefficient on *Unemployment* in regression (1-3) is actually negative, and the presumed simultaneity

[10] The election of Mitterrand may itself have been the endogenous response of voters for the party with more generous welfare policy in bad times. Such dynamics are beyond the scope of this paper.

bias is positive. Hence, if there were a bias at all, it would only mean that the true coefficient on *Unemployment* is larger in absolute value (i.e. more negative). Secondly, we run regressions of the form *Y=f[Unemployment(-1), Unemployment(-2), Benefits(-1), Benefits(-2)]*, for both *Y=Unemployment* and *Y=Benefits* for 19 OECD countries during 1971-89. When *Y=Unemployment*, at least one coefficient on lagged benefits was significant in 12 of the 19 cases, although in 3 of them the coefficient was negative. When *Y=Benefits*, at least one of the coefficients on *Unemployment* was significant in 10 of the 19 cases, of which four indicated positive changes in unemployment increased the level of *Benefits*, four suggested higher levels of *Unemployment* reduced *Benefits* and one had a positive coefficient. These results suggest that, in terms of Granger causality, it is just as likely that causality runs from unemployment to benefits, as it is that causality runs the opposite way. Third, we look at the effect of the oil crisis by comparing the change in benefits during the four years between 1971-75 and 1977-81. In both cases, the increase in unemployment benefits was larger in the countries that were more dependent on oil, measured by the price of oil (adjusted by exchange rates and weighted by the country's net oil imports divided by GDP).[11]

Another approach is to instrument the unemployment rate. The instrument used in regression (4) in Table I is the level of openness in the economy (defined as exports plus imports over GDP) and its lag. The coefficient on *Unemployment* is negative, significant and larger in absolute value than the OLS estimate. This is to be expected, as the presumed simultaneity bias is positive. The coefficients on *Interest Rate* and *Right Wing* are similar to the OLS estimates. We experimented with other variables as instruments, such as the import weighted country specific price of oil, an index of military expenditures (suggested by Phelps [1994]) and the proportion of home ownership (as in Oswald [1997]), with very similar results.[12] The instruments pass standard tests for

[11] Section V below presents a historical case study and a section on direct legislative evidence that can be interpreted as providing further evidence on this issue.

[12] The first stage regressions show that openness is positively related with unemployment. Interestingly, Rodrik [1998] shows that openness increases welfare spending (i.e. benefits times unemployment). He argues that more open economies are more risky so that benefits are higher.

instrument validity, although the low power of such tests is a source of concern. A similar picture emerges from focusing on the lagged values in regression (5). This specification uses the lag of openness as an instrument for *Unemployment (-1)*. Regression (6) uses the level of home ownership, the lag of openness and the level and lag of the import-weighted price of oil and the index of military spending as instruments.

A third potential objection to regressions (1-3) is that the benefit data mix up data on unemployment insurance programs with traditional income support programs (welfare). In some countries, the U.S. and Canada are two examples, people using unemployment insurance programs are a very different group of individuals than people on welfare, so that very different political dynamics may drive movements in these components of the benefit measure. In order to investigate this issue we obtained the raw data used to construct the benefit index from the OECD and calculated two different measures of benefits.[13] The first one, called *Benefits Short*, is a summary measure of the benefits received by a typical person during his/her first year unemployed. The second is a summary measure of the benefits received by a typical person after his/her third year unemployed. Table II repeats the same basic specifications as those in Table I, but using *Benefits Short* as the dependent variable. The estimated effects are larger than those presented in Table I. Regression (7), for example, shows that a one standard deviation increase in the unemployment rate is associated with a reduction of 6.7 percentage points in the *Benefits Short* variable, or almost 32 percent of a standard deviation in this variable. Regression (8) estimates that a one standard deviation increase in the unemployment rate leads to a cut of 8.5 percentage points in the *Benefits Short* variable, or 40 percent of a standard deviation in this variable. Regression (9) presents the general specification with similar results. Regressions (10-12) in Table II show that, using the

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However the alternative hypothesis (spending increases because there are more claimants at an unchanged level of benefits) should not be discarded, particularly since we show that the parameters of the unemployment benefit system are *negatively* correlated with the level of unemployment.

[13] We thank Pascal Marianna and David Grubb at the OECD for providing us with the raw benefit data and generous explanations regarding their construction.

exact same set of instruments, the *2SLS* estimates are much closer to the OLS estimates when the dependent variable is *Benefits Short* than when it is *Benefits*. The coefficient on *Unemployment (-1)* in regression (12) is only significant at the 9 percent level. If the import weighted price of oil, together with the levels and lags of the index of military spending and openness, are used as instruments the coefficient is significant at the 5 percent level (although the coefficient is larger in absolute size).

Table III examines the determinants of long-term benefits, *Benefits Long*. The results are much weaker. Most of the economic dynamics that appear to be driving short-term benefits are absent here. There is some evidence that political pressures affect third year benefits. Regression (14) shows that a change in government equivalent to substituting Francois Mitterrand by Margaret Thatcher is expected to bring about a reduction in unemployment benefits of 3.1 percentage points, or 26 percent of a standard deviation in the *Benefits Long* variable. The 2SLS estimates show that the same set of instruments has a much weaker effect on *Benefits Long*, compared with Table II.

Movements in interest rates (even at two-year frequencies) could be influenced by transitory movements in monetary and fiscal policy, and such changes may not influence people's decision to fund the welfare state. We repeated all the regressions presented excluding the interest rate. All the main results continue to hold. The main exception is regression (1) in Table I where the coefficient on *Unemployment* is only significant at the 7-percent level. Regression (19) in Table IV illustrates with the simple lagged specification.

A related question deals with the nature of unemployment. Economists have observed that an unemployment rate driven by a large number of people who spend little time unemployed could involve lower social costs than a similar rate of unemployment made up by few people who spend a long time unemployed. Accordingly, it may be argued that long-term unemployment may bolster political demands for unemployment benefits more than short-term unemployment. Data of this kind are only available for some of the countries in our sample, and often for a limited number of years. Thus, the evidence we provide is only *suggestive* and a proper test of how robust our main findings are to these

considerations must be left to future research. Table IV shows how benefits are related to the two measures of unemployment. It is suggestive that higher rates of long-term unemployment (the number of individuals who have been unemployed longer than 6 months divided by the labor force) tend to be associated with higher benefits while the opposite is true for the short-term unemployment rate. For example, we can reject the hypothesis that the coefficient on long-term unemployment is equal to that on the short-term unemployment rate in regression (20) at the 8 percent level. Regressions (21-22) in Table IV look for differential effects of short and long term unemployment on *Benefits Short* and *Benefits Long* using the lagged specification (which is the one yielding more precise estimates). The evidence, if anything, favours the hypothesis that short-term unemployment reduces the demand for unemployment insurance (*Benefits Short*) while long-term unemployment bolsters demands for more generous long-duration benefits.

Lastly, it could also be argued that we should include a lagged dependent variable. Although our theory does not lead us to expect that the long run response of benefits to exogenous variables to differ in the short and long run, it is important at this stage of our theoretical knowledge to keep our empirical strategy open. We repeat regressions (2) and (3), but including a lagged dependent variable. The maximum number of periods available equals 10, so a bias on the lagged dependent variable may be present. To correct for this, the System Generalised Method of Moments (SGMM) technique developed by Arellano and Bond [1991] for dynamic panel data is used to estimate regressions (23-24).[14] Although this estimator controls for the bias in the lagged dependent variable and for the omitted variable bias that occurs in OLS estimation, we still have to deal with the potential endogeneity of *Unemployment* and *Unemployment (-1)*. Hence, we use openness, military spending and home ownership as instruments. In regression (23), the coefficient on the lagged dependent variable is large and significant

[14] The estimator works by combining moment conditions for equations in first differences with moment conditions for equations in levels. By exploiting the information contained in the levels and the first differenced equations at each point in time, the estimator is the most efficient available to correct for the bias arising in panels with lagged dependent variables that control for fixed effects (for more details see Arellano and Bond [1991]).

while that on *Unemployment (-1)* is negative and significant at the 10 percent level. *Right Wing (-1)* also has a negative coefficient that is now significant at conventional levels. Its size implies that an increase in the right wing inclinations of the government equal to 3.5 standard deviations (equivalent to replacing Mitterrand by Margaret Thatcher) reduces the benefit replacement rate by 1.6 percentage points in the short run. The long run effect is to cut benefits by 22 percentage points (or 1.7 standard deviations of the benefit variable). The coefficient on the rate of interest is insignificant. Regression (24) repeats the exercise including current values.

V. Further Evidence on the Determinants of Unemployment Benefits

Our model suggests that the level of unemployment risk in the economy is an important determinant of unemployment benefits. Individuals, even if currently employed, may vote to have higher unemployment benefits when the environment is more risky. We do not have adequate data (for example on inflows) so a proper test of this hypothesis is not feasible. In this section we propose three different pieces of evidence that can be interpreted as shedding some light on this issue.

V.A. Regression Evidence

The regressions where both levels and lags of the unemployment rate are presented in the previous section could be re-interpreted to include a change in unemployment term. For example, regression (3) in Table I could be interpreted as including a contemporaneous term and a term denoting the change in the unemployment rate (because A $Unemployment_t$ + B $Unemployment_{t-1}$ = (A+B) $Unemployment_t$ - B $\Delta Unemployment_t$). If we do so, the coefficient on the current unemployment rate is –0.8 (significant at the 1 percent level) while the coefficient on the change in the unemployment rate is 0.9 (significant at the 2 percent level). This is important because the change in the unemployment rate could be interpreted as the inflow rate from employment into the unemployment pool, a variable that our model predicts should

influence benefit determination.[15] If this interpretation is adopted then the evidence is consistent with higher insurance demands when workers feel more threatened by unemployment, as described in our model (see Appendix I). The effects are economically significant. A one standard deviation increase in *DUnemployment* increases the level of benefits by 1.2-percentage points, or 9 percent of a standard deviation in the benefits variable. From a policy perspective, these results suggest that governments may not want to reduce unemployment benefits (and taxes) when unemployment is rising, even when the unemployment rate is high.

We can also re-interpret the results in regression (9) in Table II where the dependent variable is *Benefits Short*, as involving a change in the unemployment rate. The first two terms can be re-written as -2.6 *Unemployment* + 2.1 *DUnemployment*, both comfortably significant (t-statistics of -5.4 and 2.9 respectively). A one standard deviation increase in *DUnemployment* increases the level of benefits by 2.7 percentage points, or 13 percent of a standard deviation in the *Benefits Short* variable. A one standard deviation increase in the unemployment rate is associated with a reduction in *Benefits Short* of 9 percentage points, or 42 percent of a standard deviation in this variable. The coefficients on regression (24) in Table IV (SGMM) can also be interpreted as showing a negative and significant effect of the level of unemployment on benefits and a positive effect (significant at the 6 percent level) of the change in unemployment.

V. B. Direct Evidence

This section provides direct evidence consistent with the interpretation that when unemployment increases temporarily as part of the current business cycle there may be a different benefit response compared to the longer run effect on benefits of more long lasting structural unemployment. The direct evidence comes from the effect of the

[15] It can be argued, however, that the change in the unemployment rate increases because the duration of unemployment gets longer, not because inflows increase. Note, however, that if average duration increases our model suggests that workers may demand more insurance because of the higher *cost* of risk (falling unemployed is more costly) even if the risk is not higher (probability of falling unemployed remains constant). The use of *DUnemployment* means that we cannot distinguish between the effect of duration and the effect of inflows.

economic environment on benefit generosity (mainly concerning duration) as *stated* in the laws defining benefit provision in several countries.

In the US the Federal/State Extended Compensation Act of 1970 established a second layer of benefits for claimants who exhaust their regular entitlement during periods of relatively high unemployment in a state. This program provided for up to 13 extra weeks of benefits at the claimant's usual weekly benefit amount. The benefits are triggered on if the state's insured unemployment rate for the past 13-week period is 20 percent higher than the rate for the corresponding period in the past two years and the rate is at least 5 percent. Extended benefits cease to become available when the insured unemployment rate does not meet either the 20 percent requirement or the 5 percent requirement. In 1973 the 13-week rule applied, but in 1975 as labour market conditions worsened in the face of the first oil shock, Federal law made unemployment insurance payable "*for additional 26 weeks in cases of high unemployment*". This ruled until 1983 when Federal law reduced the extension back to 13 weeks.

In Canada in 1975 unemployment benefits were "*payable after a 2-week waiting period for 18 weeks extended up to 51 weeks, depending on [national and regional unemployment rates]*". Although prior to 1977, benefits depended both on the national and regional unemployment rate, after 1977 new legislation made extensions to benefit duration dependent solely on regional unemployment rates. In 1979 unemployment benefits were payable for "*up to 25 weeks, extended up to 50 weeks, depending on regional unemployment rates*". There have been a number of subsequent changes to the Canadian unemployment insurance system, three of which have involved changing the relationship between benefits and regional unemployment rates. In 1990 benefit durations varied between 17 and 50 weeks, in 1994 this was changed to between 14 and 50 weeks, and in 1996 it was changed again to vary between 14 and 45 weeks (all depending on the number of weeks the claimant has worked and the unemployment rate in their region).[16]

[16] The evidence comes from *Social Security Programs Throughout the World*, a U.S. Department of Health and Human Services publication, *Highlights of State Unemployment Compensation Laws*, a U.S. National Foundation for Unemployment Compensation and Workers' Compensation publication, and from the Department of Human Resources Development of the Canadian Government.

Hence both in the US and Canada, adverse shocks which change the unemployment rate also change benefit generosity. Other countries have also produced similar legislation. In South Africa, for example, there exists administrative discretion to increase the generosity of benefits (both in terms of duration and amount) in cases of prolonged unemployment. In Japan there are additional allowances for workers in depressed industries. Another example where a related process is visible includes countries which have recently made pro-market reforms and have seen benefit demands vary with the consequent rise in unemployment. For example, in Argentina the increase in unemployment has *"provoked calls from the unions and the church to direct more spending towards public works and increase the coverage and duration of unemployment benefits*" (The Financial Times, July 21, 1995).

V. C. Historical Evidence

Further evidence on the effect of short run increases in unemployment (in contrast to long run movements in structural unemployment) on the level of benefits can be found from historical evidence. This kind of evidence has an additional advantage. Estimating the effect of unemployment on benefits can be difficult, as reverse causality is potentially present. Since most tests for instrument validity have low power, it is important to keep our empirical strategy open to less formal evidence that can help us identify the effects of interest. We believe that standard historical accounts of the birth of the American welfare state provide such evidence. It seems that legislative efforts to introduce unemployment insurance laws were more intense in times of increasing unemployment. This has the important virtue that, by restricting attention to a period in time when there were no unemployment benefits, we rule out causality going from benefits to unemployment.

Figure 1 shows how the unemployment rate varied from 1900 to 1942 in the US, along with key dates in the legislative agenda as described in Moss [1996]. In 1915 as unemployment rose up to 7.18 percent, UI was first proposed by the American Association of Labour Legislation (AALL) and a UI bill was introduced to the Massachusetts House of Representatives on January 14, 1916 (label "1"). In the 1921

recession, as unemployment spiked upward to 8.73 percent, the AALL made a second UI proposal and Senator Huber introduced a UI bill to the Wisconsin Legislature (label "2"). The next significant date is 1931, when the unemployment rate was 15.7 per cent, having been rising up from a level of 5 percent in 1929. Wisconsin was the first US state to pass unemployment benefit legislation in 1931 (label "3"). In the following two years as unemployment reached levels of over 20 per cent, a UI scheme was considered throughout the US, culminating with President Roosevelt launching the legislative process for social security in 1934 (label "4"), and the passing of the 1935 Social Security Act (label "5").

Hence there seems to be a relationship between variations in the unemployment rate, and UI legislative activity in a period when changes in unemployment could not have been due to changes in the generosity of the (non-existent) benefit system. Blaustein [1993] observes that *"interest in unemployment insurance legislation during the 1920's , however, was weak. It was a period largely of prosperity and normalcy"*, but in contrast there was *"increased legislative activity …with the onset of the depression of the 1930s and its mounting unemployment"*. Moss [1996] notes that during this time the AALL's *"legislative agenda was thus loosely tied to the business cycle"* and *"critics charged that Andrews and his colleagues (at the AALL) were exploiting the misfortune of others to keep themselves in business"*. See Figure 1.

VI. Conclusion

Countries differ in the generosity of their unemployment insurance programs. Within each country, unemployment insurance programs change over time. This paper provides a first attempt at evaluating how much of these variations can be explained by economic and political factors. That is, we attempt to study the determinants of unemployment benefits.

To our knowledge only two theory papers, Wright [1986] and Atkinson [1990], have looked before at the positive aspects of the determination of unemployment benefits. Neither, however, allows for a positive impact of unemployment benefits on the

unemployment rate, an important feature of the model presented here. Benefits are set maximising the wishes of the employed, the unemployed and firms subject to budget constraint and a non-negative trade-off between benefits and unemployment. Comparative static results depend on the size of the "incentive effects".

Using OECD data for 1971-1989 and controlling for both country and time fixed effects, the paper finds evidence that benefits fall when the unemployment rate is high. This is consistent with the tax effect identified in Wright's and Atkinson's models, as well as the model presented here. There is no evidence, however, of the existence of a negative relationship between the interest rate and benefits (as predicted in Wright [1986]). There is weaker evidence suggesting that benefits decrease with right-wing preferences of the government (consistent with the analysis of Boadway and Oswald [1982]). In fact, the importance of economic variables relative to political variables is, perhaps, one of the more surprising aspects of the analysis we present.

We construct a measure of the parameters of the unemployment benefit system paid out in the first year of unemployment. We then compare this with a measure of long term benefits. It seems that our results are substantially stronger when the short-term benefits measure is used, suggesting that different political dynamics drive movements in unemployment insurance as compared to welfare payments. We allow for a simultaneity bias on the unemployment coefficient and find some evidence of exogenous effects of unemployment on the parameters of the benefit system. Since the presumed effect of unemployment on benefits has a non-negative sign, accounting for this bias reinforces the result that a higher level of unemployment leads to a lower level of benefits.

Our model suggests that individuals will demand higher benefits when the economic environment is more risky. A shortcoming of our analysis is the lack of suitable data to test this hypothesis. Our regression results can be read as providing evidence that benefits increase with positive changes in the unemployment rate, a variable that provides one measure of the employment risk in the environment. Direct evidence from the laws that define benefits and historical evidence on the birth of the American Welfare State are also consistent with this view.

Appendix I

To put more structure into the problem assume there are a fixed number of identical, risk averse workers who derive instantaneous utility $U(.)$. Assume that $U_w>0$, $U_{ww}<0$, $U_e<0$, where w is the wage and e is effort (subscripts denote partial derivatives). The asset equation for an employed worker is

$$rV^E = U(w-s-e)+t(V^U - V^E) \quad \text{(A1)}$$

The asset equation for an unemployed worker is

$$rV^U = U(b-s)+ j(V^E - V^U) \quad \text{(A2)}$$

where the discount rate is r, the inflow rate of employed workers into unemployment is t, and j is the job acquisition rate. Solving (A1) and (A2) simultaneously yields expressions for V^E and V^U. The first order condition (FOC) is

$$f[(1-y)\frac{\partial V^E}{\partial b}+y\frac{\partial V^U}{\partial b}-y_b(V^E - V^U)]+(1-f)\frac{\partial V^F}{\partial b}=0 \quad \text{(A3)}$$

Case I: No Unemployment/Benefit Trade-off

In order to show the negative discount rate effect of Wright [1986] and the negative unemployment level effect of Atkinson [1990] in the simplest possible setting, assume the government is captured by the employed so $y=0$ and $f=1$, so we do not have full insurance.[17] As in these models assume $m_b(b,W)=0$, so higher benefits do not affect unemployment and worker effort initially plays no role in our model. Assume accessions equal separations. Compute db/du to find that the effect is ambiguous. A higher tax burden to the employed brings about lower benefits as in Atkinson [1990], but the higher cost of falling unemployed in the bigger pool of unemployed requires higher benefits (depending on the degree of risk aversion). The first effect dominates when the utility function exhibits CARA (constant absolute risk aversion). To see the effect of the discount rate use the FOC (A3) to compute $\partial b/\P r < 0$, and use this to find $db/dr < 0$, assuming CARA. To see that the effect of inflows is ambiguous compute db/dt. The direct effect of higher inflows is to bring about higher benefits since the employed want more insurance. The indirect effect of a higher level of inflows (through unemployment) is to decrease the level of benefits with CARA.

Case II: Positive Unemployment/Benefit Trade-off

When $m_b(b,W)>0$, higher benefits induce higher unemployment. Assume the trade-off is derived from the Shapiro and Stiglitz [1984] model in which firms are able to imperfectly monitor a worker's effort so that workers must choose between supplying the required level of effort and shirking, in which case there is a probability, q, that the worker will be caught and fired. Due to the monitoring problem, worker effort, e, will be a function of

[17] We concentrate on the case where the government is the sole provider of benefits. Explaining why private firms do not provide unemployment insurance is beyond the scope of this paper.

the excess of wages over the opportunity cost of work, which depends on unemployment benefits and the unemployment rate. Consequently, firms find it individually profitable to pay higher than market clearing wages to deter shirking. Under these assumptions a "no-shirking-condition" can be derived which describes an inverse relationship between the unemployment rate and the level of wages. For simplicity, assume $y=0$ and $f=1$.

Proposition 1: If workers have CARA utility, $U(y)=-exp(-s(y-e))$ (where y is income and s is the coefficient of absolute risk aversion) and aggregate labour demand is of the form: $l(u)=a+b(1-u)^{-e}$ (where $b>0$), then the equilibrium level of benefits is (i) increasing with adverse exogenous shocks which increase the level of unemployment; (ii) decreasing with the inflow rate if $0<e<p$ (for p defined below); and (iii) increasing with the discount rate.

Proof: The FOC for problem (1) can be expressed as

$$b^s = eb(1-u^s)^{-e} - [s(1+\frac{q+Ar}{At}u^s)]^{-1} \qquad \text{(A4)}$$

where $A=1-exp(-se)$.[18] The unemployment rate can be determined as a function of the set of exogenous parameters, W, by substituting in (A4) for the labour market equilibrium determined by the intersection of aggregate labour demand with the no-shirking-condition: $l(u^S)=b^S+e+(1/s)ln(1+A/q(t/u^S+r))$.

(i) An exogenous adverse shock that increases the level of unemployment, such as a shock to labour demand arising from a drop in the value of the parameter, a, increases both terms on the right hand side of (A4). The level of benefits is therefore higher.

(ii) A higher inflow rate causes the unemployment rate to increase: $u^S_t>0$. Use (A4) to define benefits as a function of t. Then the sign of b^S_t equals the sign of $e-p$. This is negative for $0<e<p$, where $p=(1+rA/q)/exp(s(l(u^S)-b^S-e))<1$. Hence the level of benefits is less for a higher level of inflow rate.

(iii) A higher discount rate implies a higher level of unemployment: $u^S_r>0$. From (A4) the level of benefits, b^S, will also be higher.

[18] A sufficient condition for the second order condition to be satisfied is $0<e<1$.

Appendix II

Sample of 16 countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Norway, New Zealand, Sweden, The United Kingdom and The United States.

Definition of the Variables:

Benefits: The OECD index of (pre-tax) unemployment insurance benefit entitlements divided by the corresponding wage (calculated for odd-numbered years). This summary measure estimates the situation of a representative individual. It calculates the unweighted mean of 18 numbers based on all combinations of the following scenarios: *(i)* three unemployment durations (for persons with a long record of previous employment); the first year, the second and third years, and the fourth and fifth years of unemployment. *(ii)* three family and income situations: a single person, a married person with a dependent spouse, and a married person with a spouse in work. *(iii)* two different levels of previous earnings: average earnings and two-thirds of average earnings. See the OECD Jobs Study [1994].

Benefits Short: The OECD index of (pre-tax) unemployment insurance benefit entitlements divided by the wage calculated as the un-weighted mean of 6 numbers based on all combinations of the following scenarios: *(i)* unemployment duration of less than one year. *(ii)* three family and income situations: a single person, a married person with a dependent spouse, and a married person with a spouse in work. *(iii)* two different levels of previous earnings: average earnings and two-thirds of average earnings. See the OECD Jobs Study [1994].

Benefits Long: The OECD index of (pre-tax) unemployment insurance benefit entitlements divided by the wage calculated as the unweighted mean of 6 numbers based on all combinations of the following scenarios: *(i)* unemployment durations of between three and four years. *(ii)* three family and income situations: a single person, a married person with a dependent spouse, and a married person with a spouse in work. *(iii)* two different levels of previous earnings: average earnings and two-thirds of average earnings. See the OECD Jobs Study [1994].

Right Wing: Index of left/right political party strength, defined as the sum of the number of votes received by each party participating in cabinet expressed as a percentage of total votes received by all parties with cabinet representation, multiplied by a left/right political scale constructed by political scientists. Votes are from Mackie and Rose, The International Almanac of Electoral History, cabinet composition is from The Europa Yearbook (1969-1989 editions), and the left/right scale is from Castles and Mair [1984]. The scale ranges from 1 to 10.

Interest Rate: The long run real interest rate, from OECD Historical Statistics.

Unemployment: The unemployment rate from the OECD CEP data set.

DUnemployment: The change in unemployment ($=Unemployment_t - Unemployment_{t-1}$).

Unemployment < 6 months: The proportion of the labour force who have been unemployed for durations of less than 6 months.

Unemployment > 6 months: The proportion of the labour force who have been unemployed for durations of more than 6 months.

TABLE A.0. Principal Features of Nations' Unemployment Benefit Systems

1. *Australia*: Unemployment Assistance (unlimited duration) and Social Assistance.
2. *Austria*: Unemployment Insurance (for unemployment durations of up to one year), Unemployment Assistance (unlimited duration) and Social Assistance.
3. *Belgium*: Unemployment Insurance (unlimited duration) and Social Assistance.
4. *Canada*: Unemployment Insurance (for unemployment durations of up to 1 year where benefit durations are extended in regions with high unemployment) and Social Assistance.
5. *Denmark*: Unemployment Insurance (for unemployment durations of up to 5 years) and Social Assistance.
6. *Finland*: Unemployment Insurance (for unemployment durations of up to 23 months), Unemployment Assistance (unlimited duration) and Social Assistance.
7. *France*: Unemployment Insurance (for unemployment durations of up to 5 years), Unemployment Assistance (unlimited duration) and Social Assistance.
8. *Germany*: Unemployment Insurance (for unemployment durations of up to 1 year), Unemployment Assistance (unlimited duration) and Social Assistance.
9. *Ireland*: Unemployment Insurance (for unemployment durations of up to 15 months), Unemployment Assistance (indefinite duration) and Social Assistance.
10. *Italy*: Unemployment Insurance (for unemployment durations of up to 6 months).
11. *Netherlands*: Unemployment Insurance (for unemployment durations of up to 60 months), Unemployment Assistance (limited 12 month duration) and Social Assistance.
12. *Norway*: Unemployment Insurance (for unemployment durations of up to 18 months), and Social Assistance.
13. *New Zealand*: Unemployment Assistance (unlimited duration) and Social Assistance.
14. *Sweden*: Unemployment Insurance (for unemployment durations of up to 10 months), Unemployment Assistance (limited 5 month duration) and Social Assistance.
15. *United Kingdom*: Unemployment Insurance (for unemployment durations of up to 1 year), Unemployment Assistance (unlimited duration) and Social Assistance.
16. *United States*: Unemployment Insurance (for unemployment durations of up to 6 months where benefit durations are extended in States with high unemployment) and Social Assistance.

Notes: (1) All information is based on the benefit system in effect as of 1 July 1995. (2) Unemployment Assistance refers to means-tested benefits that may be conditional on previous employment history. (3) Social Assistance refers to means-tested income support whereby the government acts to secure a minimum standard of living. Social Assistance is included in the OECD Summary Measure of Benefit Entitlements only when it consists of a general income guarantee at nationally determined level, such as in Belgium, Denmark, France, Germany, Netherlands, and the United Kingdom. (4) Data sources are The OECD Jobs Study (1994), OECD Benefit Systems and Work Incentives (1998 Edition) and Social Security Programs throughout the World (1995).

TABLE A.I. Description of Data: Most and Least Generous Benefits (1971-89 Averages)

Countries	Netherlands	Denmark	Belgium	Switzerland	Japan	Italy
Benefits	0.496	0.467	0.448	0.116	0.101	0.012

TABLE A.II. Summary Statistics

Variable	Obs	Mean	Std. Dev.	Minimum	Maximum
Benefits	160	0.272	0.129	0.004	0.562
Benefits Short	160	0.426	0.211	0.01	0.888
Benefits Long	160	0.167	0.120	0	0.432
Unemployment	160	0.055	0.034	0.002	0.169
ΔUnemployment	160	0.004	0.013	-0.029	0.045
Right Wing	160	5.197	1.565	2.275	7.800
Interest Rate	160	0.022	0.035	-0.077	0.104
Unemployment < 6 months	71	0.035	0.018	0.011	0.086
Unemployment > 6 months	71	0.034	0.033	0.001	0.137

Note: Right Wing has been scaled down by a factor of 1000 in the results reported in Tables I to IV.

TABLE I

The Determinants of Unemployment Benefits in 16 OECD Countries from 1971 to 1989.

Dependent Variable: Benefits	(1) LSDV	(2) LSDV	(3) LSDV	(4) IV	(5) IV	(6) IV
Unemployment	-0.547**		0.104	-1.574**		2.102
	(0.269)		(0.397)	(0.600)		(1.610)
Unemployment (-1)		-0.832**	-0.920**		-1.547**	-3.647**
		(0.258)	(0.404)		(0.570)	(1.609)
Interest Rate	0.352*		0.236	0.449**		-0.052
	(0.213)		(0.204)	(0.230)		(0.276)
Interest Rate (-1)		0.452**	0.447**		0.530**	0.644**
		(0.197)	(0.205)		(0.210)	(0.257)
Right Wing	-1.181		2.519	-0.879		2.781
	(2.380)		(3.115)	(3.048)		(3.655)
Right Wing (-1)		-4.611*	-5.549*		-3.934	-2.714
		(2.725)	(3.102)		(2.845)	(4.043)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of Observations	160	158	158	160	158	158
R^2 (Adjusted)	0.87	0.89	0.88	0.86	0.88	0.84

Notes: Standard errors in parentheses. * denotes significance at the 10 per cent level, ** denotes significance at the 5 per cent level, LSDV denotes Least Squares Dummy Variables, IV denotes Instrumental Variables. Openness and its lag are used as instruments in regression (4). Lagged Openness is used as an instrument in regression (5). Regression (6) uses the level of home ownership, the lag of openness and the level and lag of oil and military spending as instruments.

TABLE II
The Determinants of Short-Term Unemployment Benefits, 16 OECD Countries 1971-89.

Dependent Variable: Benefits	(7) LSDV	(8) LSDV	(9) LSDV	(10) IV	(11) IV	(12) IV
Unemployment	-1.971**		-0.579	-1.689*		2.549
	(0.465)		(0.706)	(0.983)		(2.711)
Unemployment (-1)		-2.507**	-2.056**		-2.121**	-4.491*
		(0.459)	(0.718)		(0.986)	(2.637)
Interest Rate	0.650*		0.420	0.623*		0.148
	(0.367)		(0.362)	(0.377)		(0.451)
Interest Rate (-1)		0.688**	0.630*		0.646*	0.722*
		(0.350)	(0.364)		(0.364)	(0.421)
Right Wing	-3.032		1.778	-3.115		1.068
	(4.984)		(5.537)	(4.997)		(5.987)
Right Wing (-1)		-4.008	-5.189		-4.373	-1.969
		(4.839)	(5.516)		(4.923)	(6.624)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of Observations	160	158	158	160	158	158
R^2 (Adjusted)	0.86	0.87	0.87	0.86	0.87	0.85

Notes: Standard errors in parentheses. * denotes significance at the 10 per cent level, ** denotes significance at the 5 per cent level. Short-Term Unemployment Benefits are defined as having duration of less than 1 year. LSDV denotes Least Squares Dummy Variables, IV denotes Instrumental Variables. Openness and its lag are used as instruments in regression (10). Lagged Openness is used as an instrument in regression (11). Regression (12) uses the level of home ownership, the lag of openness and the level and lag of oil and military spending as instruments.

TABLE III

The Determinants of Long-Term Unemployment Benefits ,16 OECD Countries, 1971-89.

Dependent Variable: Benefits	(13) LSDV	(14) LSDV	(15) LSDV	(16) IV	(17) IV	(18) IV
Unemployment	-0.212		0.641	0.422		0.983
	(0.313)		(0.466)	(0.661)		(1.707)
Unemployment (-1)		-0.001	-0.518		0.994	-0.051
		(0.308)	(0.474)		(0.686)	(1.660)
Interest Rate	0.326		0.274	0.306		-0.250
	(0.247)		(0.239)	(0.253)		(0.284)
Interest Rate (-1)		0.278	0.314		0.170	0.238
		(0.235)	(0.240)		(0.253)	(0.265)
Right Wing	1.430		5.433	1.368		4.908
	(3.347)		(3.657)	(3.357)		(3.770)
Right Wing (-1)		-5.584*	-7.308**		-6.526*	-7.443*
		(3.246)	(3.642)		(3.422)	(4.171)
Country Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of Observations	160	158	158	160	158	158
R^2 (Adjusted)	0.80	0.82	0.82	0.80	0.80	0.81

Notes: Standard errors in parentheses. * denotes significance at the 10 per cent level, ** denotes significance at the 5 per cent level. Long-Term Unemployment Benefits are defined as having duration of greater than 3 years. LSDV denotes Least Squares Dummy Variables, IV denotes Instrumental Variables. Openness and its lag are used as instruments in regression (16). Lagged Openness is used as an instrument in regression (17). Regression (18) uses the level of home ownership, the lag of openness and the level and lag of oil and military spending as instruments.

Table IV:
The Determinants of Benefits, further specifications16 OECD Countries, 1971-89.

	(19) LSDV	(20) LSDV	(21) LSDV	(22) LSDV	(23) SGMM	(24) SGMM
Benefits (-1)					0.928**	0.944**
					(0.053)	(0.051)
Unemployment (-1) < 6 Months		-0.998	-2.450	-0.262		
		(0.892)	(2.223)	(0.923)		
Unemployment (-1) > 6 Months		0.743*	-0.236	1.156**		
		(0.430)	(1.072)	(0.445)		
Unemployment						0.871
						(0.545)
Unemployment (-1)	-0.748**				-0.418*	-1.255*
	(0.260)				(0.237)	(0.662)
Interest Rate						-0.049
						(0.215)
Interest Rate (-1)		-0.016	0.375	0.051	0.058	0.033
		(0.317)	(0.789)	(0.328)	(0.143)	(0.130)
Right Wing						-0.792
						(1.031)
Right Wing (-1)	-5.176*	3.418	4.855	4.392	-2.829**	-2.866**
	(2.758)	(3.066)	(7.348)	(3.173)	(1.011)	(1.026)
Country Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes
No of Observations	158	71	71	71	158	158
R^2 (Adjusted)	0.88	0.94	0.89	0.93	0.94	0.94

Notes: Standard errors in parentheses. * denotes significance at the 10 per cent level, ** denotes significance at the 5 per cent level, LSDV denotes Least Squares Dummy Variables. Dependent Variables: regressions (19,20, 23 and 24) = *Benefits*, regression (21) = *Benefits Short*, regression (22) = *Benefits Long*. Regression (23) uses the lags of openness, home ownership and military spending as instruments, while regression (24) uses the lags and levels of oil, military spending and the lags of openness and home ownership.

References

Arellano, M. and S. Bond. [1991] "Some tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations", Review of Economic Studies, 58, 277-297.

Atkinson, A. [1990] "Income Maintenance for the Unemployed in Britain and the Response to High Unemployment", Ethics, 100: 569-85.

Baily, M. [1978] "Some Aspects of Optimal Unemployment Insurance", Journal of Public Economics, 10(3): 379-402.

Blanchard, O. and L. Katz [1997] "What We Know and Don't Know about the Natural Rate of Unemployment", Journal of Economic Perspectives, Winter Edition, 11(1): 51-72.

Blaustein, S. [1993] Unemployment Insurance in the United States: The First Half Century,W.E. Upjohn Institute for Employment Research, Michigan.

Boadway, R. and A. Oswald [1982] "Unemployment Insurance and Redistributive Taxation", Journal of Public Economics, 20: 193-210.

Cameron, David [1978] "The Expansion of the Public Economy: A Comparative Analysis", American Political Science Review, 72, 1243-61.

Castles, F. and P. Mair [1984] "Left-Right Political Scales: Some Expert Judgements", European Journal of Political Research, 12: 73-88.

Di Tella, R. and R. MacCulloch [1995]. "The Determination of Unemployment Benefits", Applied Economics Discussion Paper No 180, IES, Oxford University, February.

Ehrenberg, R. and R. Oaxaca [1976] "Unemployment Insurance, Duration of Unemployment and Subsequent Wage Gain", American Economic Review, 66(5): 754-66.

Feldstein, M [1978] "The Effect of Unemployment Insurance on Temporary Layoff Unemployment", American Economic Review, 68(5): 834-46.

Flemming, J. [1978] "Aspects of Optimal Unemployment Insurance: Search, Leisure, Savings and Capital Market Imperfections", Journal of Public Economics, 10(3): 403-25.

Kiander, J. [1993] "Endogenous Unemployment Insurance in a Monopoly Union Model When Job Search Matters", Journal of Public Economics, 52, pp. 101-15.

Mackie, T. and R. Rose [1982] The International Almanac of Electoral History, 3d ed., London: Macmillan Press.

Moss, D. [1996], Socializing Security, Harvard University Press.

OECD, Paris. [1994] Jobs Study, Energy Balances of OECD Countries, Historical Statistics.

Oswald, A. [1997] "A Conjecture on the Explanation for High Unemployment in the Industrialised Nations Part I", University of Warwick, mimeo.

Ram, R. [1987] "Wagner's Hypothesis in Time-Series and Cross-Section Perspectives: Evidence from 'Real' Data for 115 Countries", Review of Economics and Statistics, 69: 194-204.

Rodrik, D. [1998] "Why Do More Open Economies have Bigger Governments", Journal of Political Economy, 106 (5), 867-96.

Roubini, N. and J. Sachs [1989] "Fiscal Policy", Economic Policy, 30: 101-13.

Saint-Paul, G. [1996] "Exploring the Political Economy of Labour Market Institutions", Economic Policy, 23, October: 265-315.

Shapiro, C. and J. Stiglitz [1985] "Equilibrium Unemployment as a Worker Discipline Device", American Economic Review, 74(3): 433-44.

Shavell, S. and L. Weiss [1979] "The Optimal Payment of Unemployment Benefits over Time", Journal of Political Economy, 87(6): 1347-62.

Wright, R. [1986] "The Redistributive Roles of Unemployment Insurance and the Dynamics of Voting", Journal of Public Economics, 31: 377-99.

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