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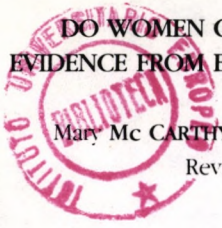

DO WOMEN CAUSE UNEMPLOYMENT? EVIDENCE FROM EIGHT O. E. C. D. COUNTRIES

by

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Introduction

It has been widely argued that changes in labor force composition, in particular the increase in the proportion of women which has affected labor markets in the last fifteen years, has had an upward effect on the aggregate unemployment rate. By increasing the structural component of unemployment, it is claimed, changes in labor force composition increase the "non-inflationary rate of unemployment". Thus the difficulties which the economy has in absorbing additional members of certain groups leads to an increase in the basic rate below which unemployment cannot be pushed without having inflationary consequences.

Because different age-sex components of the labor force have different skills and work expectations, a changing composition can introduce strains into the labor market adjustment process. Therefore, it can put a considerable upward pressure on the overall unemployment rate. In particular, it is suggested that young people and women's supply is typically characterized by a shorter duration of employment spells and a higher turnover into and out of the employment pool.

This paper challenges this view on the basis of some preliminary estimates of the effect of changes of labor force composition on the aggregate unemployment level in eight O.E.C.D. countries (Australia, Canada, Finland, Germany, Italy, Sweden, U.K. and U.S.A.) in the last twenty one years (1966 - 1986).

We present three results. First, in none of the countries considered is there a clear association between changes in group percentage of the labor force and in group unemployment: both the expected rate of unemployment for a given labor force share (%) and the effect of changes in the labor force share on the unemployment rate differ across sex and age groups.

Second, groups which have traditionally experienced comparatively higher unemployment rates are often the ones that are absorbed more rapidly into the labor force and vice versa for groups which were traditionally better off. This explains why, although in most countries, increasing percentages of women in the labor force are associated with higher aggregate unemployment rates, there may be no causal relation between increasing female participation rates and the aggregate unemployment rate.

In fact, and this is our third result, had the composition of the labor force remained constant at the level of the sixties, in four out of the eight countries under study, unemployment rates would not have been lower over the whole period. The only case where the compositional change in the labor force works adversely for the whole period considered, is Germany. This is a country where, unlike elsewhere, female participation rates have remained fairly stable over time, but new groups of young women have had difficulties in getting absorbed into the employment pool.

In general, our results show that, although compositional changes in the labor force have been very pronounced and the weight of females in the labor force has increased everywhere, the ability of different economies to absorb new female participants has been very diversified. There is no general relation between compositional changes and aggregate unemployment performance as it is predicted by a simple mismatching model.

The analysis proceeds in two steps. First, we compute the effect of changes in the distribution of the labor force on group unemployment. Second, we combine the impact of this effect and the direct effect of changes in the distribution of participation on total unemployment rate, to calculate a hypothetical unemployment rate which corresponds to what would have occurred had there been no compositional change.

The same methodology has been used to analyze U.S. data (Gracia-Diez, 1987) and it is an improvement with respect to previous studies (Kaufman, 1980) because it considers the indirect effect of group unemployment on the aggregate unemployment rate as well as the direct effect of changes in composition of the labor force.

The methodology provides a direct estimate of one of the components of the "natural" or "non-inflationary" rate of unemployment. As we have mentioned, the composition of the labor force is one of the determinants of this rate. Because of changes in labor force composition and other structural changes, it has been argued, the European non-inflationary

rate has risen with respect to the sixties. (See Bean et al., 1986). This figure is generally computed indirectly, from the estimation of a wage equation; instead, this paper provides an attempt at a direct estimation. Our findings cast some doubts on the usefulness of the concept of the non-inflationary rate of unemployment. Even within Europe we have a very diversified range of situations; in some economies, for example, Sweden, there is a large negative compositional effect on the unemployment rate; in countries such as Germany the same effect is positive; and in cases like Italy and the U.K., the effect changes over time. This diversity in the face of similar labor force developments suggests that outcomes are heavily influenced by policy, but then there are as many non-inflationary rates of unemployment as there are policy options.

The by-product of the analysis is the estimation of a variable which reflects the tightness of labor markets. As it has been argued elsewhere, [Perry (1970) and Wachter (1976)], changes in the composition of the labor force and in the unemployment experience of different age-sex groups make the aggregate unemployment rate a misleading proxy for labor market tightness. Labor force groups are not perfect substitutes for each other; therefore, the inflow of women and, where it took place, of youths to the labor market, should be associated with a tighter overall labor market for a given rate of unemployment. Consequently, an estimate of the unemployment rate "purged" of the shifts that are attributable to changes in the composition of the labor force could be a better indicator of the labor market tightness than the aggregate unemployment rate itself.

The paper is organized as follows. The first section contains some descriptive elements of the changing structure in labor supply in the eight countries considered. In section two and three we present a general framework, fully describe the methodology employed to measure the compositional impact on the unemployment rate and analyse the results for the estimated model. Section four contains the estimation results for the "shift-free" unemployment rates, and section five presents the summary and conclusions.

1. Labor Supply Patterns and Trends

The long-term trends in aggregate participation rate have moved in a different way in various geographical areas of the developed world. Since 1970, this rate has been increasing in North America while it has remained fairly stable in O.E.C.D. European countries and other non-European O.E.C.D. countries. However, when we look at participation rates of different demographic groups (Appendix A, Tables A1 - A8), we notice several characteristics which are common to all O.E.C.D. countries:

(i) an increase in the participation rates of females aged 20 - 54 since the early seventies;

(ii) a corresponding decrease in male participation rates (all age groups);

(iii) a declining trend in the participation rates for the 55 and over age group (both sexes), especially since the second half of the seventies (excepting Sweden).

The pattern diverges for young workers (aged 16 - 19) with participation rates increasing in North America and generally declining in all other countries (with the exception of the U.K. since the mid-seventies.)

These trends in participation have determined changes in the composition of the labor force as well as differences in group unemployment rates.

Changes in the distribution of the labor force have generally paralleled changes in participation rates: in 1986 the weight of female workers between 20 and 54 years old is several percentage points higher than in the late sixties; old workers have an increasingly lower weight while teenagers show a more diversified behaviour both over time and across countries.

For the most part there has been an upward trend in unemployment rates for all age-sex groups, with an accelerated increase in the early to mid-seventies, followed by a levelling off in the eighties (Appendix A, Tables A1 - A8). Unemployment rates have been particularly high for youths aged 16 - 19 and 20 - 24. The experience of female unemployment is more diversified across countries and across groups. Therefore we have common trends in unemployment for young people but a diversified dynamic behaviour of their weight in the distribution of the labor force while we have common trends in the female share of the labor force and a diversified performance of female unemployment.

2. Changes in Unemployment: Direct and Indirect Effects

The overall unemployment rate can be expressed as a weighted average of the unemployment rates in demographic groups with the weights being the proportions of the labor force corresponding to each group. We can write:

$$(1) \qquad u_t = \Sigma_i l_{it} u_{it}$$

where u_{it} is the unemployment rate within the demographic group i (age and sex), and l_{it} is the number of persons in the labor force within the i^{th} group expressed as a fraction of the total labor force.

Choosing a period of time as a fixed benchmark and denoting it by subscript t=0, the change in the observed unemployment rate from period "0" to period "t" can be decomposed as follows:

$$(2) \qquad \Delta u_t = u_t - u_0 = \Sigma_i (\Delta l_{it}) u_{i0} + \Sigma_i (\Delta u_{it}) l_{i0} + \Sigma_i (\Delta l_{it})(\Delta u_{it})$$

This latter equation decomposes the total change in unemployment into three parts: (i) a part attributable solely to variations in the composition of the labor force, $\Sigma_i (\Delta l_{it}) u_{i0}$; (ii) a part generated solely by changes in the unemployment rates of individual demographic groups, $\Sigma_i (\Delta u_{it}) l_{i0}$; and (iii) an effect determined by the interaction of variations in labor force composition and variations in the unemployment rates of individual groups, $\Sigma_i (\Delta l_{it})(\Delta u_{it})$.

While existing studies have measured the direct effect of changes in labor force composition on the overall unemployment rate, the objective of this paper is to measure two separate effects of these changes.

The idea is that changes in labor force composition affect the overall unemployment rate not only through the direct effect, as measured by the first term on the right hand side of equation (2), but also through the indirect effect which they may have on the individual unemployment rates. The sign of the indirect effect is ambiguous. On the one hand we may think that as certain groups come to represent a larger fraction of the labor force they exert an upward effect on their own unemployment rate. On the other hand, certain groups participate only insofar as they can find employment (women for example) so that their higher weight in the labor force will correspond to a lower group unemployment rate.

Rewrite equation (2) as:

$$(2') \qquad \Delta u_t = \Sigma_i (\Delta l_{it}) u_{i0} + \Sigma_i (\Delta u_{it}) l_{it}$$

Let $\hat{\Delta u}_{it} = (\hat{u}^L_{it} - \hat{u}^L_{i0})$ be the predicted change in the unemployment rate of the i^{th} group ascribable to the change in labor force composition. Then,

$$(3) \qquad \hat{\Delta u}^L_t = \Sigma_i (\Delta l_{it}) u_{i0} + \Sigma_i (\hat{\Delta u}^L_{it}) l_{it}$$

is the estimate of the total amount of change in the observed unemployment rate, from period "0" to period "t", attributable to compositional variations in labor supply.

In the next section, the methodology employed to estimate $\hat{u}^{L}_{it}$ is described in detail.

3. Estimating the Indirect Effect: Changes in the Composition of the Labor Force and Age-Sex-Specific Unemployment Rates

We wish to decompose the change in the unemployment rates of the individual groups into a predicted component ascribable to the change in labor force composition, and a predicted component ascribable to the change in general economic conditions (either cyclical or structural).

We can write the unemployment rate of the age-sex group i in period t as the sum of a group-specific component (a_i), a time-specific component (b_t), and a component depending on the fraction of the labor force comprised by group i in period t ($\lambda_i l_{it}$),

$$u_{it} = m + a_i + b_t + \lambda_i l_{it} + v_{it} \qquad (4)$$

for i = 1, 2,..., and t=1, 1...,T, where v_{it} is the group's disturbance term.

The model is a modification of the standard dummy variable or fixed effects model, in which the coefficient of the continuous explanatory variable, λ_i, is allowed to vary over age-sex groups (i). The intercepts $m_{it} = m + a_i + b_t$ are assumed to be fixed parameters which, along with the slope coefficients, λ_i's, need to be estimated. To handle the estimation problem, the following dummy variables are defined:

$W_i = 1$ for the i^{th} age-sex group, $i = 1, 2, \ldots, I$

0 otherwise

$Z_t = 1$ for the time period t, $t = 1, 2, \ldots, T$

0 otherwise

The model can be written as:

$$(5) \quad u_{it} = \mu + \Sigma_{i=1}^{I-1} \alpha_i W^*_i + \Sigma_{t=1}^{T-1} \beta_t Z_t^* + \Sigma_{i=1}^{I} \lambda_i W_i l_{it} + \varepsilon_{it}$$

where $W^*_i = W_i - W_I$, for $i=1,2,\ldots,I-1$, and $Z_t^* = Z_t - Z_T$, for $t=1,2\ldots,T-1$ and the restrictions $\Sigma a_i = 0$ and $\Sigma b_t = 0$ have been imposed.

The parameters to be estimated are μ, the "general mean intercept" that is constant over time and individual groups, α_i which measures the difference from the general mean of the i^{th} age-sex group, β_t which represents the difference from the general mean for the time period t and λ_i, the slope coefficient relating the fraction of the labor force comprised by group i with the unemployment rate relative to the same individual group.

Once the parameters have been estimated, the predicted group i's unemployment rate in period t becomes:

$$\hat{u}_{it} = \hat{\mu}_{it} + \hat{\lambda}_i l_{it}$$

where $\hat{\mu}_{it} = \hat{\mu} + \hat{\alpha}_i + \hat{\beta}_t$.

Hence,

$$(6) \quad \Delta\hat{u}_{it}^{L} = \hat{u}_{it} - [\hat{\mu}_{it} + \hat{\lambda}_i l_{i0}] = \hat{\lambda}_i [l_{it} - l_{i0}]$$

is the predicted change in the unemployment rate of the individual group i, for all i, from period "0" to period "t", imputed to the change in the composition of the labor force.

We have divided the working-age population into eight groups, males and females aged 16-19, 20-24, 25-54, and 55 and over.[1]

Equation (5) is estimated for the sample period 1972-86 for the United Kingdom, and 1968-86 for all other countries, where the choice of the starting date has been determined by availability of data. Data are annual.

The estimation technique is a three-stage procedure which is a variant of the generalized least squares method suggested by Wallis (Wallis, 1967). It can be summarized as follows:

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1. There are some country deviations from these age groupings (dictated by availability of data) viz., the young age group is 15 - 19 years for Canada, Finland, and Germany and 14 - 19 for Italy. For Italy also the prime age group is 25 - 59 years and the old age group is 60 +.

In the first stage the entire pooled model is estimated using instrumental variables. The instrumental variable method is applied in order to resolve the problem of inconsistency which may be caused by causality feedback between unemployment rates of the individual groups and the fraction of the labor force comprised by each group[2]. The instruments chosen are the second lagged value of l_{it} and a time trend.[3] The first lag has been dropped due to the presence of first order autoregressive schemes in each of the time-series disturbances.

Since these parameter estimates are consistent, they are used in the second stage to calculate the regression residuals ε_{it}:

$$\varepsilon_{it} = u_{it} - [\Sigma_{i=1}^{I-1} \hat{\alpha}_i IV_{W^*_i} + \Sigma_{t=1}^{T-1} \hat{\beta}_t IV_{Z^*_t} + \Sigma_{i=1}^{I} \hat{\lambda}_i IV_{W_i l_{it}}]$$

and hence, to estimate consistently the autocorrelation coefficients corresponding to each of the time-series autoregressive processes. It should be noted that, with this procedure, the coefficients of each autoregressive scheme are allowed to vary from individual group to individual group.

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2. The distribution of the labor force may be affected by the magnitude of the unemployment rates. When the unemployment rate of an individual group is high, workers in this group might become discouraged and drop out of the labor force. The same reasoning applies to encouraged workers when unemployment rates are lower.

3. For Canada a quadratic time trend was also included.

In stage three; using these autocorrelation coefficients, the transformation of the dependent and independent variables is constructed, and the generalized difference form of the pooled model is estimated.

The results for all eight countries are described in Table 1. The age-sex group dummies measure the differential effect of the distinct demographic groups from the general mean intercept. The time dummies measure the differential effect in any period from the average impact over the whole period. In addition to the t tests associated with individual coefficients, F tests for the two sets of dummy variables representing each attribute classification were carried out. The results of these F tests are presented in Tables 2 and 3.

In Table 2 rejection of the null hypothesis, HO: Different time pattern for all groups, for all t, means that different age and sex groups do not have any common temporal pattern. This is an indication of the degree of synchronization in the dynamic behavior of group unemployment. On the other hand, rejection of the null hypothesis, HO: common intercept for all groups, indicates that the average relation between the relative weight in the labor force and the unemployment rate differs across groups. In Table 3, rejection of the null hypothesis, HO: different time pattern for all countries, for all t, means that different countries do not have any common temporal pattern (for each separate group) while rejection of the null hypothesis, HO: common intercept for all countries, indicates that the average conditional unemployment rates differ across countries (for each separate group).

Results from Table 1 show a number of interesting features:

(i) there is no general relation between relative average performance with respect to the unemployment rate (group dummy) and rate of absorption into the employment pool (slope coefficient). However, teenage males (16 to 19 years) and prime age females (25 to 54 years) have generally higher unemployment rates although the latter group has good absorption prospects.

(ii) Female performance differs across groups in all countries. Younger women (20 - 24) do better than prime age females in terms of average unemployment rates but worse in terms of absorption. This highlights the importance of a disaggregated analysis.

(iii) Old workers, if male, have a relatively low average rate of unemployment for a given share in the labor force. Also, they exhibit a positive relation between labor force shares and unemployment which is probably the effect of early retirement legislation. The results for old females, on the other hand differ widely across countries.

(iv) European countries do not appear to fall into any "natural" groupings; we can distinguish three clear cases: Sweden, where young women do relatively well in terms of average unemployment and relatively badly in terms of absorption while prime age females have the opposite pattern; Italy, where young females do badly in terms of unemployment rates and relatively well in terms of absorption and vice versa for old females; and Germany, where the results appear to be driven by 20-24 year old females who have done very well on average but whose new participants face difficulties in finding employment.

Results from Table 2 and 3 may be summarized as follows:

(i) Average conditional unemployment experience differs significantly across groups (Table 2) and across countries (Table 3).

(ii) In each separate country, different age and sex groups have a common time pattern. This indicates that there are common features in their dynamic behaviour probably attributable to the business cycles.[4]

(iii) While male groups have a common time pattern in different countries, female groups except for teenagers do not. This is an interesting finding which indicates that female unemployment is not synchronized across countries and which reinforces the point made elsewhere in the paper about differences in countries' capacities to absorb the increasing number of female participants.

4. Estimating the Total Effect: Changes in the Composition of the Labor Force and the Aggregate Unemployment Rate

As explained in previous sections, once equation (5) is estimated, the predicted compositional changes in the unemployment rates of the individual groups, $\Delta\hat{u}_{it}$, for all i, are derived from equation (6). The estimate of the compositional impact on the overall unemployment rate is then computed as indicated in equation (3). (Gracia-Diez, 1987).

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4. This interpretation is supported by the fact that results from regression estimates indicate that the time dummies alternate between runs of positive values and runs of negative values corresponding to years of recession and expansion.

In order to compute equation (6) and equation (3) we must choose a benchmark period. Results are obviously sensitive to the benchmark period chosen. For our purposes it is of course desirable to choose a period preceding major changes in labor force composition. Given data availability, the chosen period is 1966-69 for all countries except the U.K., where it is 1970-71.

Two series of estimates are computed from equation (3). The first series, $\Sigma_i (\Delta l_{it}) u_{i0}$, we have called the direct effect and the second series, $\Sigma_i (\Delta \hat{u}^L_{it}) l_{it}$, the indirect effect. The sum of these two series is a measure of the amount of change in the unemployment rate in each year that stems from the amount of change in the makeup of the labor force ($\Delta \hat{u}^L_t$). The amount of change in the unemployment rate is measured against the average rate that prevailed in the benchmark period. Having calculated $\Delta \hat{u}^L_t$ we then constructed a hypothetical or "shift-free" unemployment rate. The difference between the published actual unemployment rate and the hypothetical rate is attributable to the compositional impact. Figures 1 - 8 show the actual and hypothetical unemployment rates for each country in the sample. The results for each country are now summarized.

We can divide the countries into three categories:

(i) Countries whose change in labor force composition (from the benchmark period) has had an adverse effect (positive compositional effect) on their overall unemployment rate. The only case here is Germany.

(ii) Countries whose change in labor force composition has had a favorable effect (negative compositional effect) on their overall unemployment rates. These are Australia, Canada, Sweden and the U.S.A.

(iii) Countries experiencing both adverse and favorable compositional changes over the period 1970 - 86. These are Italy, Finland and the U.K.

Therefore, had the labor force composition remained constant at the level of the late sixties, the aggregate unemployment rates would generally not have been lower. In fact, in four out of the eight countries considered, it would have been higher.

The result reveals that in these latter cases new entrants into the labor force are absorbed into the employment pool relatively more rapidly than the others. Since the new groups are generally female, we should conclude that in Australia, Canada, Sweden and the USA, female entrants find jobs more easily than in the other countries in the sample.

This effect seems to be particularly strong in Sweden where large increases in the percentage rates of prime age women in the labor force have gone together with an increasing gap between the actual and the hypothetical rate of unemployment which, from 1983 to 1986, has been over 2%. Prime age women are driving the result in Australia and Canada as well, but in these cases the relative effect is smaller than in Sweden. In the U.S.A. the total effect is increasing but it quite small (it reaches 0.6% in 1986); in this case the relevant age group is women between 20 and 24 years of age who have experienced relatively high unemployment rates on average, but are now absorbed at a high speed.

The case of Italy is interesting and counterintuitive. Here the total compositional effect becomes negative around 1977, just after a large jump in the percentage of all female groups in the labor force. It is clear that, in this case, women are worse off than men in terms of average performance, but have less difficulties in finding employment. The U.K. result is the opposite and less controversial: the compositional effect becomes positive in 1978, just after a large jump in the participation rate of teenagers.

Germany is the country in our sample that has experienced the smallest compositional changes in the labor force and, at the same time, has seen a positive compositional effect on unemployment for the whole period. Female participation rates in Germany have been traditionally high and the increasing trend is less pronounced than in other countries. However, young women aged 20 to 24 years have had difficulties in being absorbed into employment.

5. Summary and Conclusions

In this paper we have estimated the amount of change in the aggregate unemployment rate which may be attributed to changes in the age-sex composition of the labor force in eight O.E.C.D. countries: Australia, Canada, Finland, Germany, Italy, Sweden, U.K. and U.S.A.. Given data limitations, the period considered was 1966 - 86 for all countries except the U.K. where it was 1970 - 86.

While these countries share some characteristics in the behavior of labor supply, there are also some differences which make the results interesting on a cross country basis. Firstly, each country has experienced a general upward trend in the aggregate unemployment rate. Secondly, while the increase in the unemployment rate among young persons is common to all countries, the dynamic behaviour of their participation in the labor force is diversified across countries -- increasing in the U.S.A. and Canada and declining elsewhere. Thirdly, in the case of females, the labor force share has followed a common increasing trend in all countries while their unemployment patterns for some individual age groups have diverged across countries -- falling since the mid seventies in the U.S.A. but rising elsewhere. Fourthly, there has been a general decline in all countries in the weight of old persons in the labor force, together with a rise in their unemployment rate in most countries. Finally, there has been a decline in male labor force participation rates coinciding with an increase in their unemployment rates.

It has been argued that increases in female participation rates and, where it has occurred, in young persons' participation rates, have exerted an upward pressure on the aggregate unemployment rate. This is especially true in the anglo-american literature where increases in unemployment rates have been credited (at least in part) to large and persistent differences in the structure of labor supply among several age-sex groups. In this context, continuous changes in the composition of the labor force are seen as outrunning the ability of employers to adapt and thereby causing strains in the labor market adjustment process.

The purpose of this study has been to evaluate this hypothesis. To do this we identified two components of movements in the unemployment rate: the direct effect stemming from changes in the weights of the unemployment rates of individual age-sex groups; and the indirect effect which is a consequence of changes in participation. It is the latter effect which has been neglected in previous studies. We have used a methodology (Gracia-Diez, 1987) to incorporate the impact of demographic changes on individual unemployment rates in the estimate of the compositional impact on the overall rate. In order to decompose movements in the unemployment rates of individual groups into a component ascribable to the changes in labor force composition and a component attributable to other factors, a dummy variable model was used.

Results show that, in evaluating the effect on unemployment of changes in the weight in the labor force of particular groups, it is important to separate the average from the marginal effect. Groups which have experienced high unemployment rates on average maybe absorbed into the employment pool more rapidly than groups with a lower average unemployment rate. This is what we observe when jobs are created ad hoc for particular groups as in the case of employment creation for women in Sweden, for example. In these cases, contrary to common wisdom, an increase in participation is accompanied by a decrease of the overall unemployment rate instead of an increase.

The difference between marginal and average effects explains the diversity of experiences amongst different countries. The analysis reveals three categories:

(i) Countries, whose change in labor force composition (from the benchmark period) has had an adverse effect (positive compositional effect) on their overall unemployment rate; of which only Germany is an example.

(ii) Countries whose change in labor force composition has had a favorable effect (negative compositional effect) on their overall unemployment rates: Australia, Canada, Sweden and the U.S.A..

(iii) Countries experiencing both adverse and favorable compositional changes over the period 1970 - 86: Finland, Italy and the U.K..

In the field of policy, the diversity of the results across countries suggests that labor market policies directed towards specific groups can and do affect the aggregate unemployment rate, for example, part-time jobs for females may increase their absorption rates. In this context, the increase in unemployment experienced by all countries should not be seen as an increase in the non-policy-responsive natural rate.

PARAMETER ESTIMATES OF THE DUMMY VARIABLE MODEL FOR DIFFERENT COUNTRIES

	(1) AUSTRALIA[a] const.	(1) slope	(2) CANADA const.	(2) slope	(3) FINLAND const.	(3) slope	(4) GERMANY const.	(4) slope	(5) ITALY[b] const.	(5) slope	(6) SWEDEN[a] const.	(6) slope	(7) UK[a] const.	(7) slope	(8) USA[a] const.	(8) slope
MALES 15-19	77.57* (4.8)	-12.44* (-3.8)	8.44 (1.5)	1.53 (1.3)	3.79 (0.3)	-0.78 (-0.8)	34.21* (2.3)	-1.09 (-1.4)	8.81 (1.1)	0.21 (0.1)	-0.82 (-0.3)	2.08* (3.5)	-18.50 (-1.5)	9.19* (4.5)	5.30 (1.2)	-0.70 (-0.9)
FEMALES 15-19	-18.91 (-1.5)	4.49 (1.6)	-5.67 -0.9	4.36* (2.9)	-3.04 (-0.3)	1.14 (0.7)	40.36* (2.9)	-2.13* (-3.8)	51.67* (4.8)	-10.96* (-2.9)	-10.07* (-3.0)	4.45* (5.9)	19.87 (1.7)	-1.03 (-0.4)	4.92 (0.9)	-0.49 (-0.5)
MALES 20-24	-3.65	0.46 (0.1)	10.54	-0.08 (-0.1)	23.75	-4.13 (-1.1)	47.22	-3.23 (-1.3)	33.47	-2.63 (-0.9)	5.36	0.09 (-0.0)	-65.79	12.14* (5.7)	-55.93	-0.63 (-0.8)
FEMALES 20-24	16.54 (0.8)	-2.73 (-1.0)	-36.71* (-2.0)	7.27* (2.2)	-48.3 (-1.8)	7.47 (1.5)	-231.55* (-4.6)	39.3* (4.4)	-23.60 (-1.7)	5.40* (2.4)	2.29 (0.2)	0.73 (0.4)	-21.8 (-1.8)	6.70* (3.8)	31.86* (2.2)	-5.50* (-2.1)
MALES 25-54	-33.20 (-1.6)	0.74 (1.2)	-6.10 (-0.8)	0.28 (1.4)	41.57 (0.7)	1.24 (-0.7)	47.87 (1.2)	-1.08 (-1.1)	-44.62* (-2.2)	0.82 (1.8)	-17.88 (-1.8)	0.68* (2.1)	64.50 (1.1)	-1.59 (-0.9)	-3.89 (-0.8)	-0.02 (-.2)
FEMALES 25-54	20.48* (2.0)	-1.04* (-3.1)	10.99* (2.8)	-0.27* (-2.1)	3.40 (0.3)	-0.31 (-1.3)	27.04* (2.4)	0.11 (0.5)	8.65 (0.9)	-0.43 (-1.1)	14.72* (2.8)	-0.29* (-2.5)	-6.07 (-0.2)	0.41 (0.3)	-3.25 (-0.8)	-0.13 (-1.1)
MALES 55+	-17.21* (-3.1)	1.82* (2.8)	-1.08 (-0.2)	1.01* (2.8)	-8.0 (-1.0)	0.51 (1.1)	19.25 (1.8)	0.10 (0.1)	-21.39* (-2.7)	4.00* (2.3)	1.07 (0.3)	0.47 (1.2)	15.65 (1.4)	-0.66 (-0.7)	-11.26* (-3.0)	0.45 (1.1)
FEMALES 55+	-41.62* (-4.9)	13.69* (5.0)	19.59* (2.5)	3.95* (-2.0)	-13.16 (-1.0)	1.57 (0.8)	15.60* (2.8)	-3.33* (-2.0)	-12.98* (-2.2)	9.03* (2.2)	5.34 (0.9)	-0.26 (-0.3)	12.12 (0.9)	-1.50 (-0.6)	-24.71* (-2.9)	3.5 (1.7)
COMMON CONST.	9.67 (1.1)		-3.88 (-0.8)		10.68 (0.8)		-25.00* (-2.0)		4.14 (0.4)		-5.38 (-1.6)		-7.77 (-1.1)		14.77* (3.45)	
Q33	57.85 (0.005)		58.98 (0.003)		61.98 (0.002)		83.05 (0.000)		96.48 (0.000)		78.35 (0.000)		40.54 (0.045)		72.53 (0.000)	
Adj.Rsq.	.90		.92		.84		.90		.88		.70		.96		.98	

NOTES: For the parameter estimates the figure in parentheses is the t value; for the Q statistic the figure is the probability > F.
One asterisk indicates a coefficient significantly different from zero with at least 95% confidence.
a The young age group is 16-19. b The age groups are 14-19, 20-24, 25-59 and 60+.

TABLE 2

F- TESTS FOR THE JOINT SIGNIFICANCE OF TIME DUMMIES AND GROUP DUMMIES

	(1) AUSTRALIA	(2) CANADA	(3) FINLAND	(4) GERMANY	(5) ITALY	(6) SWEDEN	(7) UK	(8) USA
HO: COMMON INTERCEPT FOR ALL GROUPS								
COMPUTED F(7, 95)	12.53	3.78	2.02	5.79	6.86	3.38	6.56	3.58
SIGNIFICANCE LEVEL	0.000	0.001	0.06	0.000	0.000	0.000	0.000	0.020
RESULT	REJECT	REJECT	ACCEPT	REJECT	REJECT	REJECT	REJECT	REJECT
HO: DIFFERENT TIME PATTERN FOR ALL GROUPS								
COMPUTED F(17, 95)	10.28	16.93	11.01	8.78	6.17	5.74	6.66	23.81
SIGNIFICANCE LEVEL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RESULT	REJECT	REJECT	REJECT	REJECT	REJECT	REJECT	REJECT	REJECT

TABLE 3

F- TESTS FOR THE JOINT SIGNIFICANCE OF TIME DUMMIES AND COUNTRY DUMMIES

	(1) MALE 16-19	(2) FEMALE 16-19	(3) MALE 20-24	(4) FEMALE 20-24	(5) MALE 25-54	(6) FEMALE 25-54	(7) MALE 55+	(8) FEMALE 55+
HO: COMMON INTERCEPT FOR ALL COUNTRIES								
COMPUTED F(7, 67)	6.37	4.92	6.01	6.50	8.93	3.49	9.49	2.53
SIGNIFICANCE LEVEL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.022
RESULT	REJECT	REJECT	REJECT	REJECT	REJECT	REJECT	REJECT	REJECT
HO: DIFFERENT TIME PATTERN FOR ALL COUNTRIES								
COMPUTED F(13, 67)	5.76	3.61	8.44	2.33	5.10	1.52	3.27	0.95
SIGNIFICANCE LEVEL	0.000	0.000	0.000	0.012	0.000	0.131	0.000	0.508
RESULT	REJECT	REJECT	REJECT	REJECT	REJECT	ACCEPT	REJECT	ACCEPT

FIGURE 1

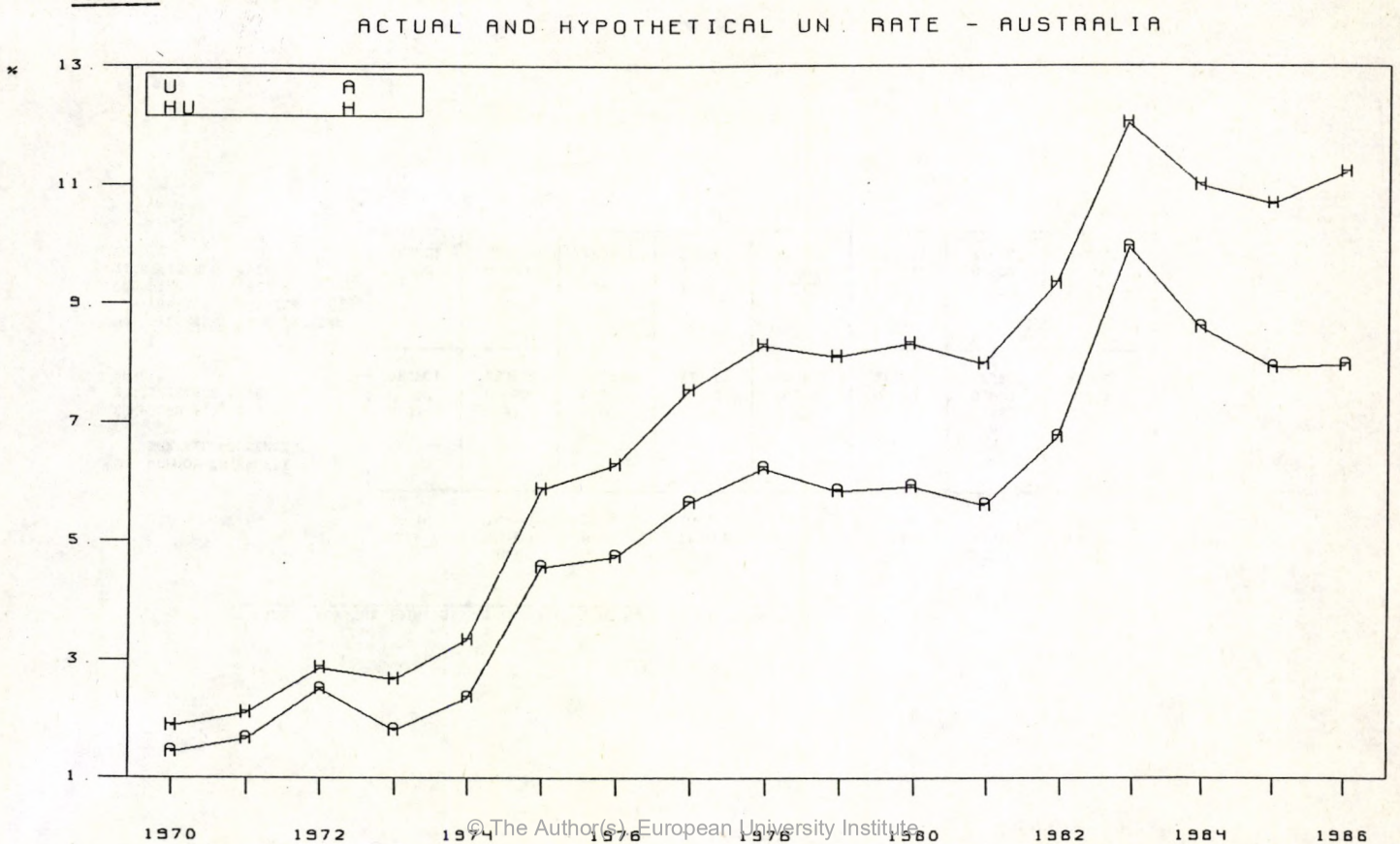


FIGURE 2

ACTUAL AND HYPOTHETICAL UN. RATE - CANADA

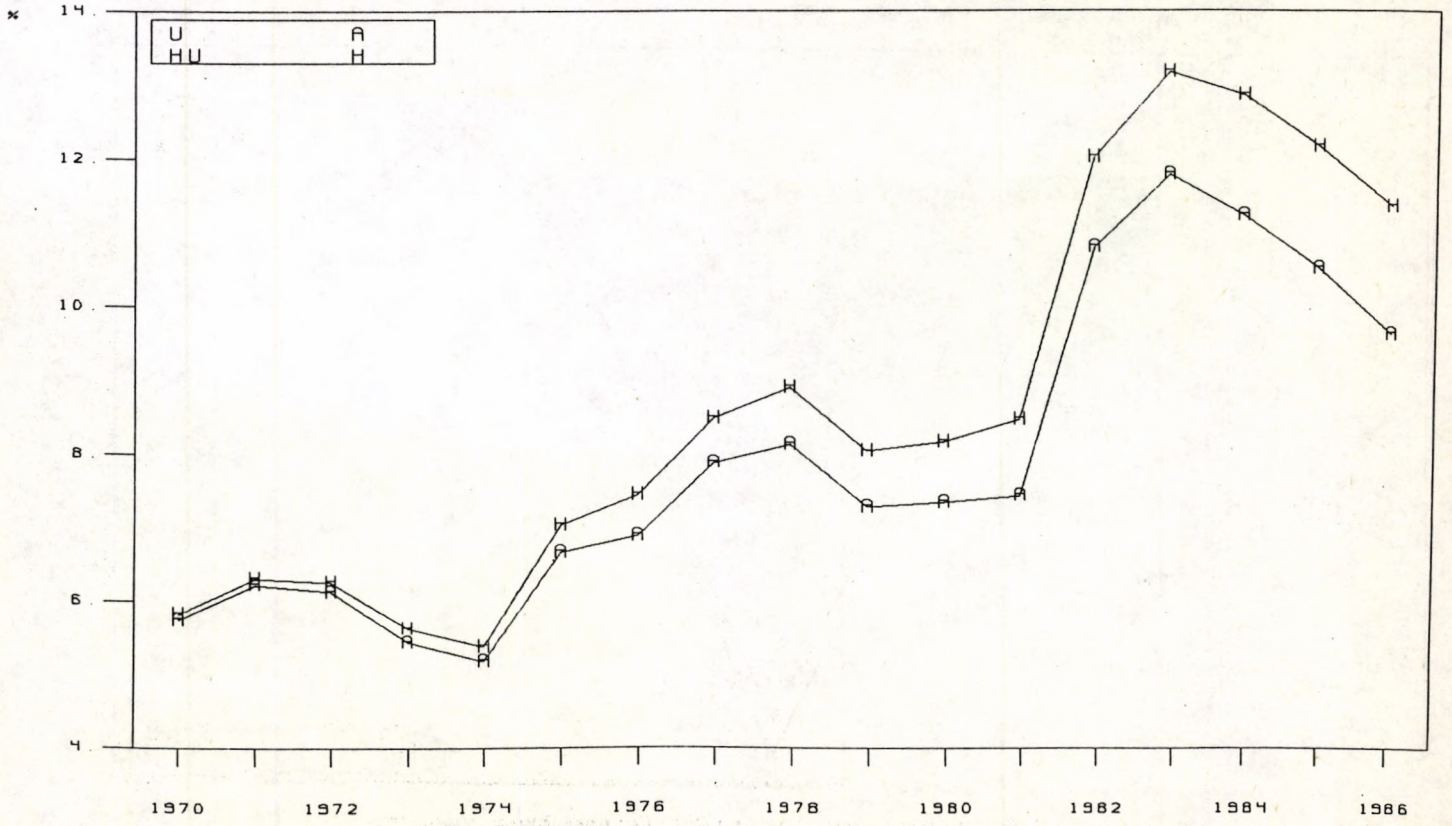


FIGURE 3

ACTUAL AND HYPOTHETICAL UN. RATE - FINLAND

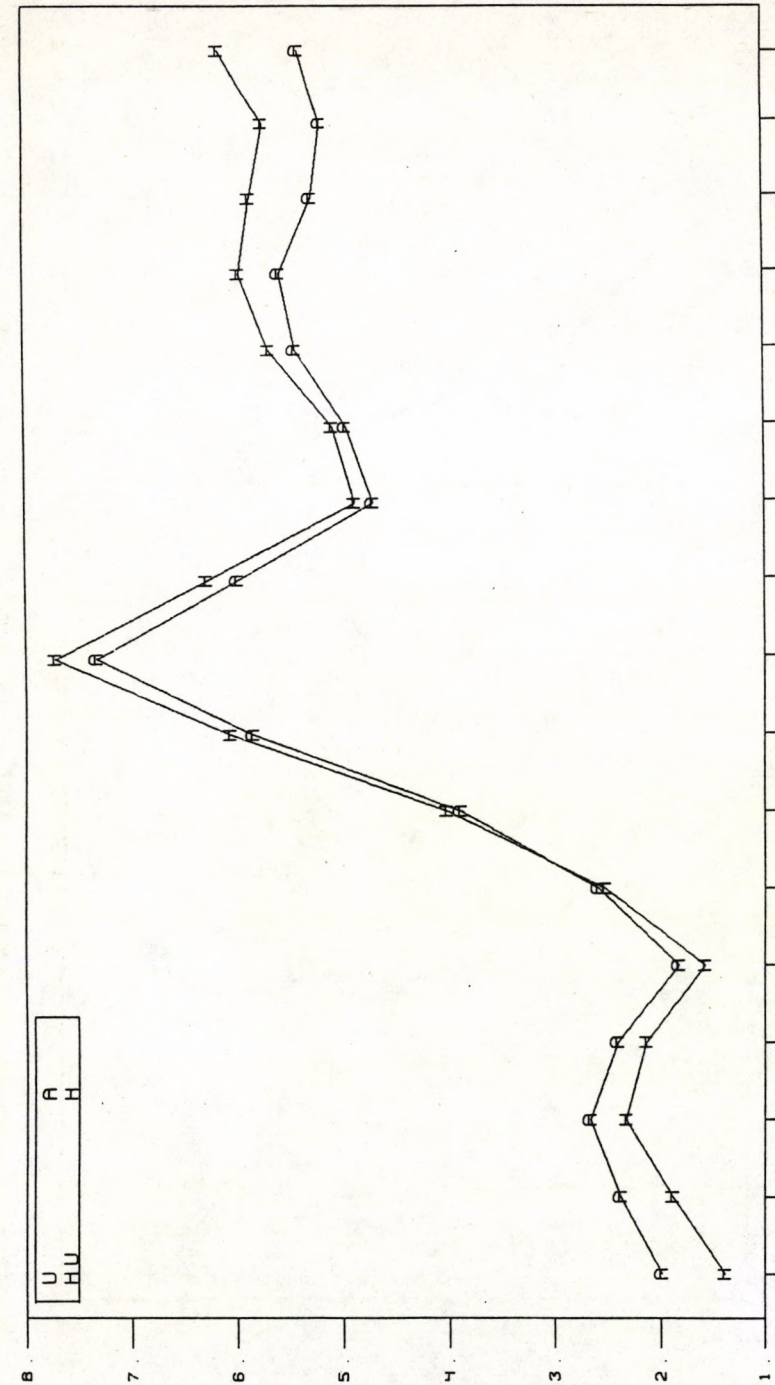


FIGURE 4

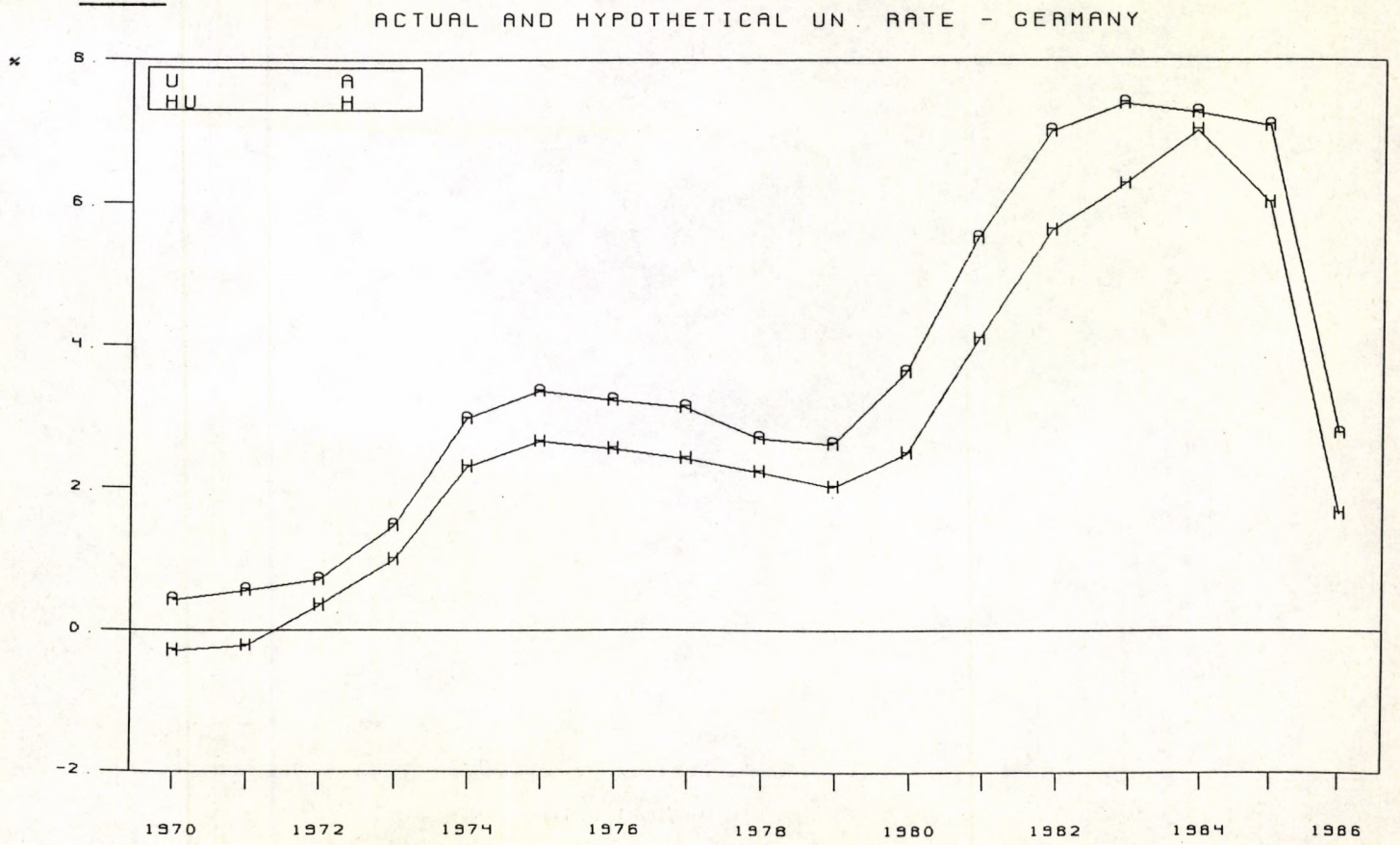


FIGURE 5

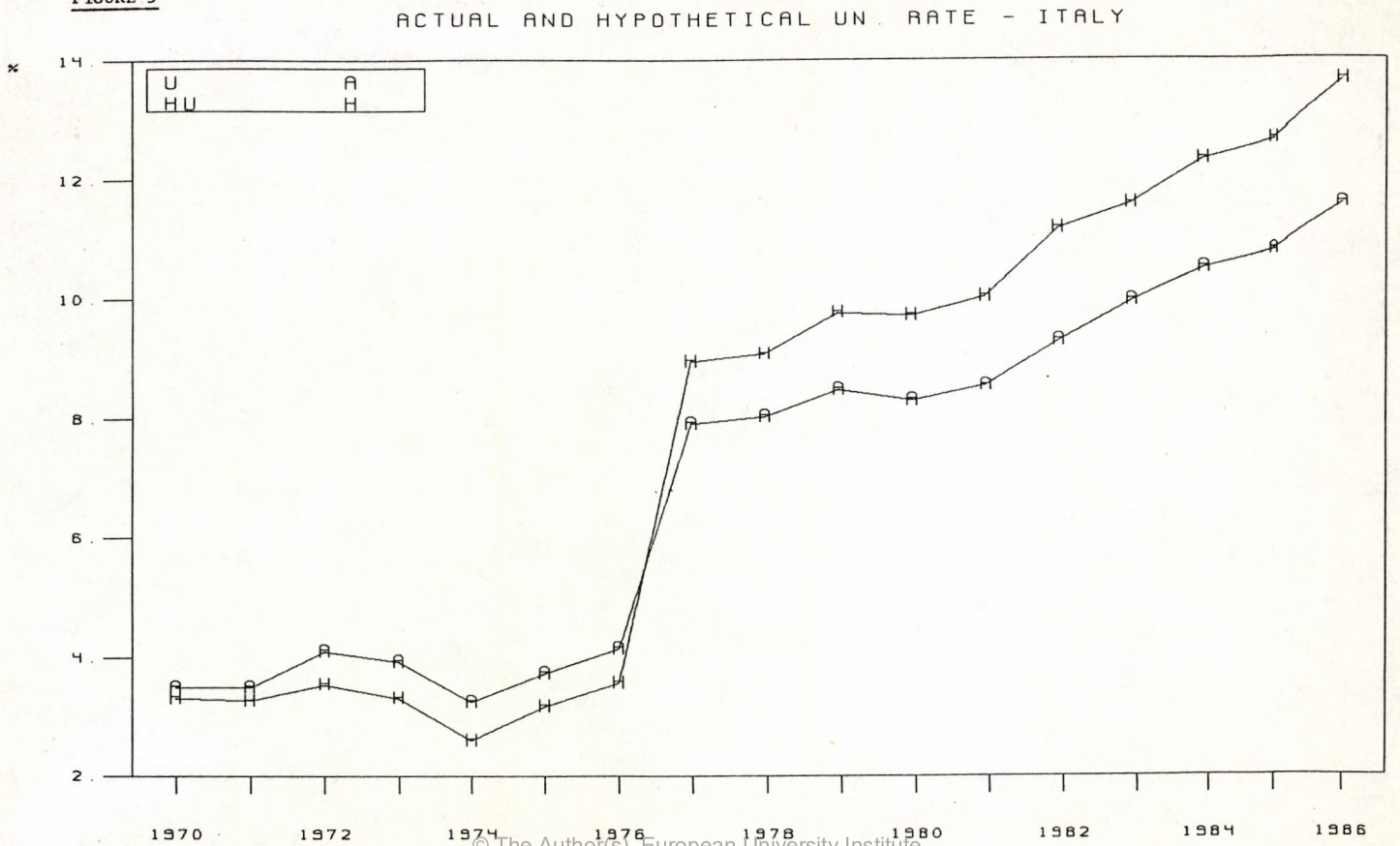


FIGURE 6

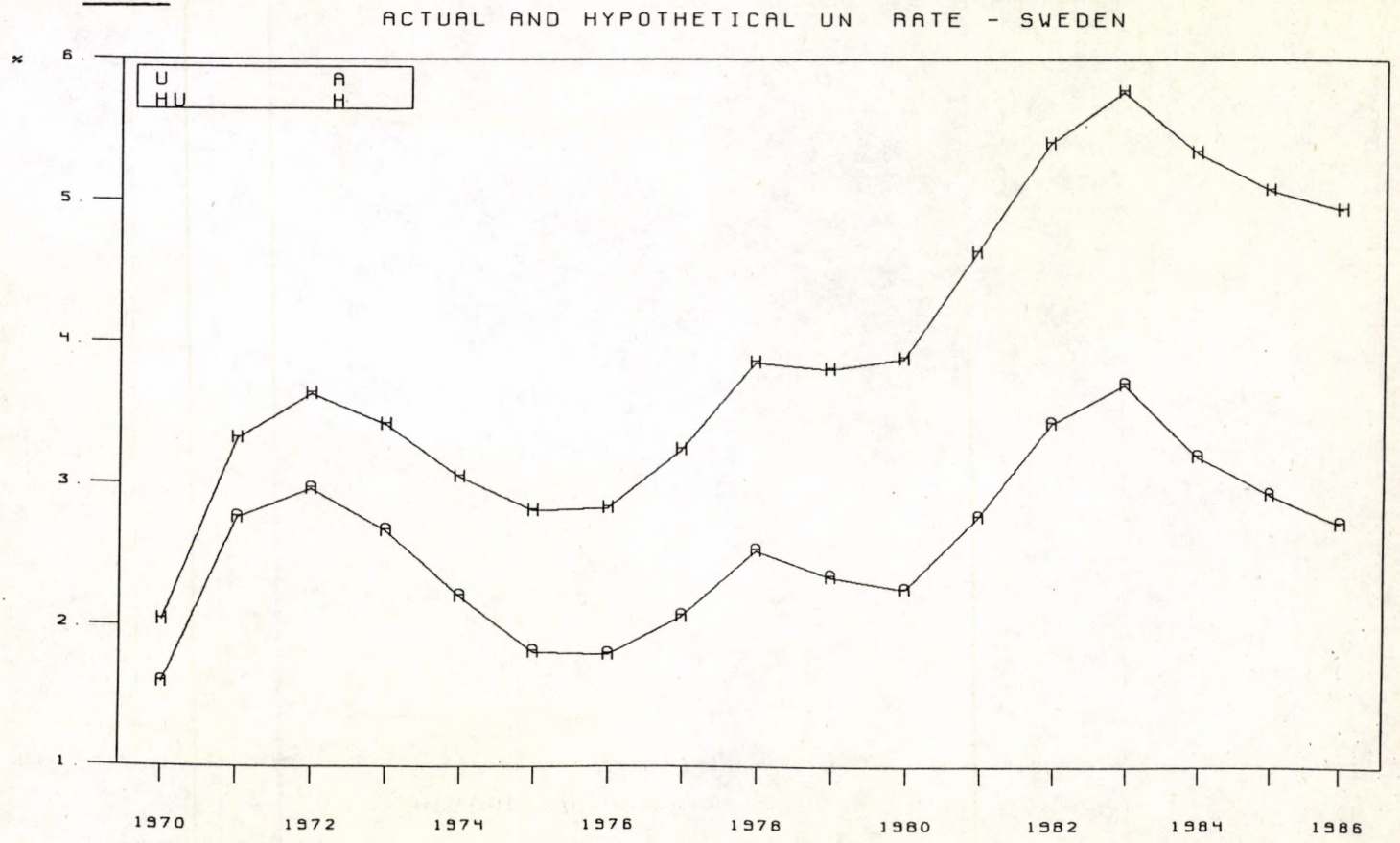


FIGURE 7

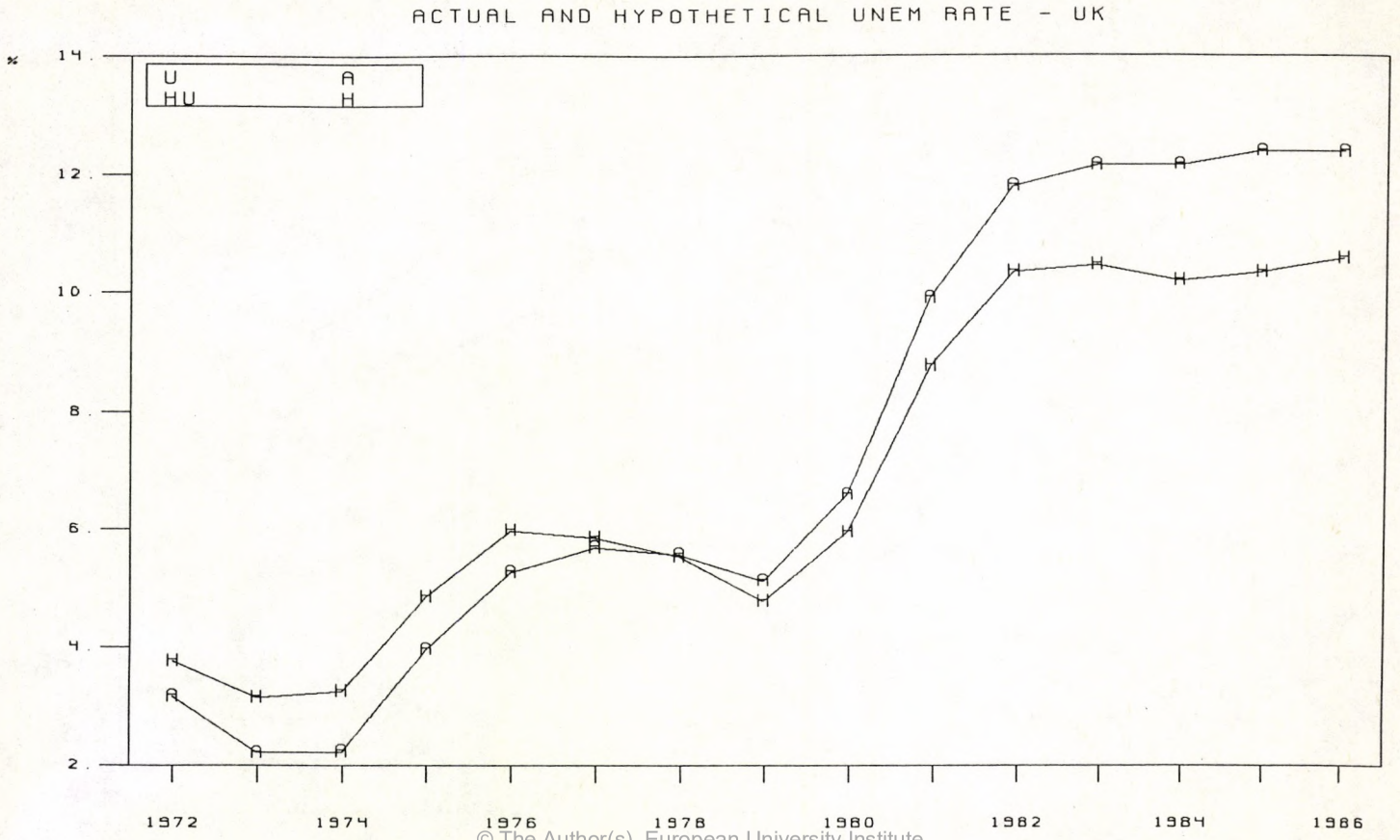
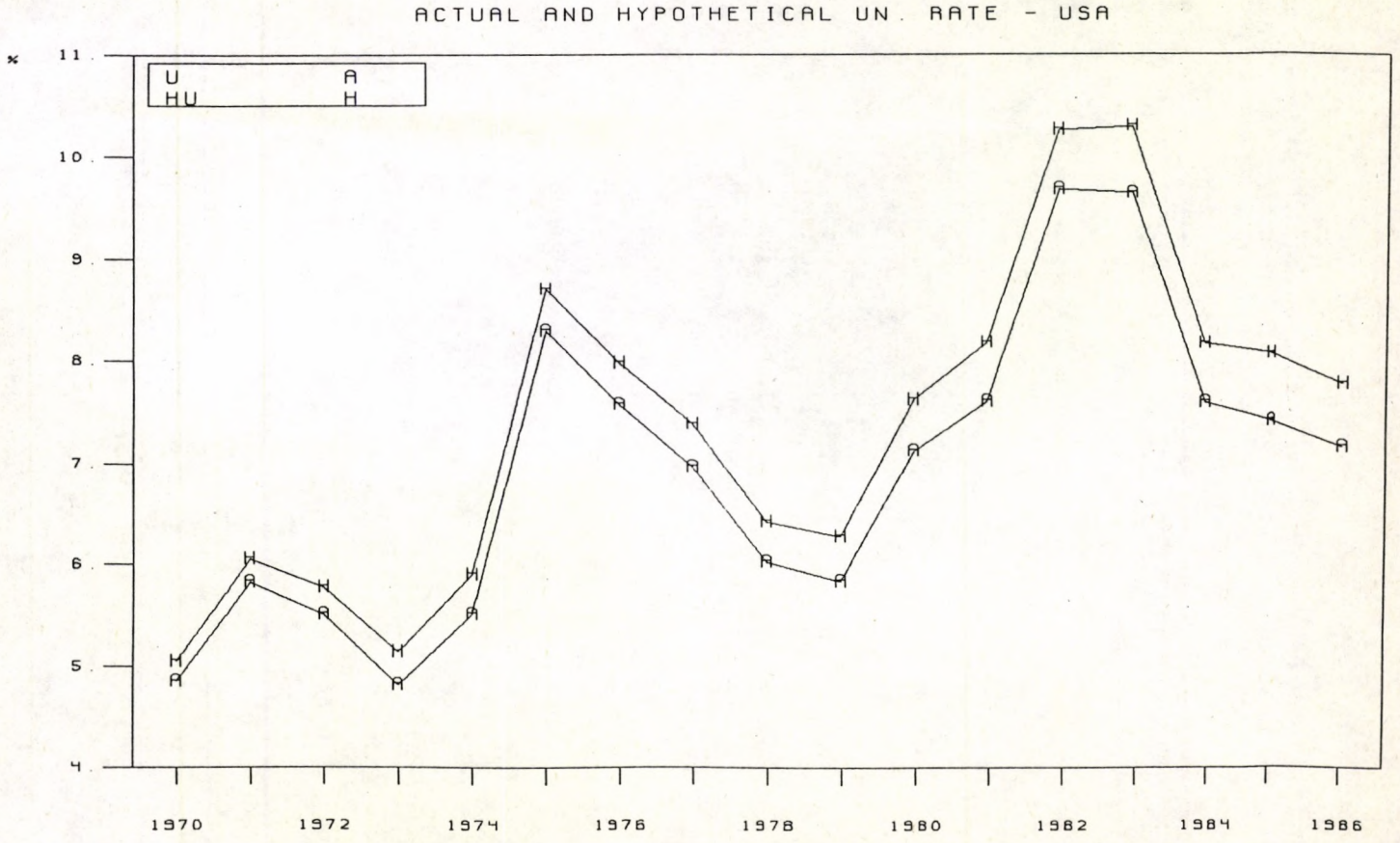


FIGURE 8



APPENDIX A

TABLE A1

AUSTRALIA

CIVILIAN LABOR FORCE (CLF), LABOR FORCE PARTICIPATION RATE (LFP), PERCENTAGE DISTRIBUTION OF THE LABOR FORCE (%LF) AND UNEMPLOYMENT RATE (%UN), BY AGE AND SEX

AGE AND SEX		1966	1970	1975	1980	198
MALES						
16-19	CLF	34650	33390	36390	41190	4014
	LFP	66.7	61.2	60.0	62.8	58.
	%LF	7.07	6.10	5.95	6.17	5.3
	%UN	2.54	2.87	10.85	14.69	18.7
20-24	CLF	40420	49150	51690	56850	5895
	LFP	93.7	92.3	90.1	90.5	88.
	%LF	8.24	8.98	8.45	8.52	7.8
	%UN	1.36	1.26	5.22	8.48	12.3
25-54	CLF	212961	229481	252901	269770	30343
	LFP	97.3	97.2	95.9	94.5	93.
	%LF	43.44	41.92	41.33	40.41	40.5
	%UN	0.89	0.69	2.32	3.18	5.6
55+	CLF	52520	56400	54970	51430	50250
	LFP	57.3	56.8	50.0	41.2	36.
	%LF	10.69	10.30	8.98	7.70	6.72
	%UN	1.09	0.89	2.49	2.94	5.5
FEMALES						
16-19	CLF	32660	31050	34290	37800	37490
	LFP	63.0	57.0	57.3	59.2	56.6
	%LF	6.66	5.67	5.60	5.66	5.00
	%UN	3.95	3.64	15.08	18.76	19.52
20-24	CLF	24810	33580	37780	44510	48580
	LFP	58.2	62.5	65.3	71.1	74.5
	%LF	5.06	6.13	6.17	6.67	6.49
	%UN	2.82	2.02	6.85	9.08	9.88
25-54	CLF	79600	99221	126879	148651	192201
	LFP	37.3	43.0	49.6	53.3	60.3
	%LF	16.24	18.13	20.73	22.27	25.69
	%UN	2.27	2.18	4.65	4.69	6.32
55+	CLF	12720	15100	17080	17380	17769
	LFP	12.1	13.1	13.3	11.6	10.1
	%LF	2.59	2.76	2.79	2.60	2.29
	%UN	1.26	1.26	1.81	2.24	3.03

TABLE A2

CANADA

CIVILIAN LABOR FORCE (CLF), LABOR FORCE PARTICIPATION RATE (LFP), PERCENTAGE DISTRIBUTION OF THE LABOR FORCE (%LF) AND UNEMPLOYMENT RATE (%UN), BY AGE AND SEX

AGE AND SEX		1966	1970	1975	1980	1986
MALES						
15-19	CLF	40100	44201	62500	68000	53900
	LFP	44.51	43.25	54.59	58.07	55.91
	%LF	5.02	4.61	5.46	5.48	4.83
	%UN	9.97	16.06	15.36	17.06	18.18
20-24	CLF	60900	73500	86000	98700	96700
	LFP	87.37	83.24	84.98	86.20	84.53
	%LF	8.17	8.67	8.04	7.79	7.05
	%UN	5.25	10.48	10.46	11.45	15.51
25-54	CLF	334100	356000	394900	435400	495102
	LFP	97.09	96.24	94.79	94.82	93.88
	%LF	46.06	44.44	41.22	38.96	38.42
	%UN	3.02	4.83	4.25	4.94	7.72
55+	CLF	80800	86101	86000	88800	89000
	LFP	57.14	55.23	50.50	46.27	40.57
	%LF	11.34	10.73	9.16	8.32	7.30
	%UN	4.33	5.46	4.19	3.83	6.63
FEMALES						
15-19	CLF	33000	34800	52800	58900	48600
	LFP	36.91	34.94	47.44	52.22	52.71
	%LF	4.15	3.72	4.68	4.80	4.39
	%UN	6.67	11.78	14.39	15.28	15.23
20-24	CLF	40700	53200	68900	82700	85800
	LFP	55.75	58.79	67.02	72.93	76.20
	%LF	5.15	6.17	6.40	6.58	6.27
	%UN	2.70	5.07	9.14	10.76	12.94
25-54	CLF	123498	148801	211898	277699	372700
	LFP	35.26	39.83	50.49	60.08	69.78
	%LF	16.29	17.80	21.30	24.13	28.03
	%UN	1.78	2.89	6.75	6.84	8.88
55+	CLF	25300	29601	34500	41900	45200
	LFP	16.82	17.12	17.61	18.26	17.19
	%LF	3.82	3.85	3.73	3.95	3.70
	%UN	1.58	2.70	4.06	4.53	6.42

TABLE A3

FINLAND

CIVILIAN LABOR FORCE (CLF), LABOR FORCE PARTICIPATION RATE (LFP), PERCENTAGE DISTRIBUTION OF THE LABOR FORCE (%LF) AND UNEMPLOYMENT RATE (%UN), BY AGE AND SEX

AGE AND SEX		1966	1970	1975	1980	1986
MALES						
15-19	CLF	14800	13800	10600	9400	7200
	LFP	60.91	63.30	51.96	48.21	41.62
	%LF	5.69	5.59	4.68	4.32	3.44
	%UN	2.70	4.35	6.60	11.70	13.89
20-24	CLF	12900	18300	16700	16200	16000
	LFP	69.73	79.57	77.32	82.23	83.33
	%LF	5.40	6.85	6.59	7.05	6.65
	%UN	2.33	3.28	4.19	4.94	5.75
25-54	CLF	77800	78100	87500	93700	100700
	LFP	94.99	93.98	92.30	92.22	93.41
	%LF	37.35	35.89	36.12	35.95	36.58
	%UN	1.54	2.56	2.17	3.95	4.96
55+	CLF	18800	20400	16800	14000	13500
	LFP	61.24	62.20	50.76	40.12	35.71
	%LF	10.07	9.99	8.28	6.84	6.15
	%UN	1.60	1.47	1.19	2.86	1.18
FEMALES						
15-19	CLF	10800	9400	8000	6800	5900
	LFP	46.55	45.19	41.03	36.36	33.44
	%LF	4.33	3.98	3.64	3.17	2.83
	%UN	2.78	2.13	7.50	13.23	11.86
20-24	CLF	11100	14000	13400	12800	13200
	LFP	62.36	64.52	65.37	68.45	71.74
	%LF	4.78	5.60	5.62	5.85	5.65
	%UN	1.80	1.43	3.73	7.03	6.82
25-54	CLF	59500	61400	74600	81700	90600
	LFP	68.71	70.98	78.53	82.69	87.28
	%LF	26.32	26.25	29.82	31.50	33.95
	%UN	0.84	0.81	1.74	3.55	3.42
55+	CLF	13500	14200	13000	12900	12700
	LFP	32.22	31.42	27.54	25.90	25.60
	%LF	6.07	5.84	5.25	5.31	5.15
	%UN	0.74	1.41	2.31	5.43	6.30

TABLE A4

GERMANY

CIVILIAN LABOR FORCE (CLF), LABOR FORCE PARTICIPATION RATE (LFP), PERCENTAGE DISTRIBUTION OF THE LABOR FORCE (%LF) AND UNEMPLOYMENT RATE (%UN), BY AGE AND SEX

AGE AND SEX		1966	1970	1975	1980	1986
MALES						
15-19	CLF	128199	133400	127599	126300	116601
	LFP	66.60	65.26	54.98	47.00	45.78
	%LF	6.70	6.39	5.70	4.95	4.53
	%UN	0.23	0.19	4.40	2.48	5.66
20-24	CLF	167100	164501	168401	190899	209601
	LFP	86.72	86.35	78.69	79.24	76.05
	%LF	7.24	8.26	7.73	8.00	7.26
	%UN	0.18	0.19	5.21	3.00	7.92
25-54	CLF	1079000	1115500	1185500	1194310	1195410
	LFP	96.72	97.10	95.11	93.63	90.63
	%LF	40.98	41.14	42.91	42.93	42.47
	%UN	0.85	0.29	2.25	2.98	0.85
55+	CLF	344801	304503	200899	181103	188800
	LFP	56.24	48.92	34.84	31.03	30.21
	%LF	9.96	8.72	6.56	6.22	6.23
	%UN	1.47	0.72	3.22	3.74	7.98
FEMALES						
15-19	CLF	120101	121500	109899	102599	94101
	LFP	65.59	62.24	49.98	40.54	39.74
	%LF	6.58	6.09	5.11	4.16	3.79
	%UN	0.25	0.51	5.42	4.84	8.82
20-24	CLF	129101	123600	142101	153100	179899
	LFP	69.82	67.91	67.67	67.95	70.53
	%LF	5.76	6.55	6.70	6.84	6.64
	%UN	0.39	0.60	5.90	5.63	10.46
25-54	CLF	558797	565903	641595	659095	719200
	LFP	45.88	47.34	51.57	53.65	57.84
	%LF	18.94	19.42	22.57	24.04	26.60
	%UN	1.19	0.80	4.21	5.46	1.19
55+	CLF	163698	152798	112402	114302	98500
	LFP	18.91	16.59	12.34	11.88	10.06
	%LF	3.84	3.42	2.71	2.87	2.48
	%UN	0.49	0.47	3.40	5.22	10.70

TABLE A5

ITALY

CIVILIAN LABOR FORCE (CLF), LABOR FORCE PARTICIPATION RATE (LFP), PERCENTAGE DISTRIBUTION OF THE LABOR FORCE (%LF) AND UNEMPLOYMENT RATE (%UN), BY AGE AND SEX

AGE AND SEX		1966	1970	1975	1980	1986
MALES						
14-19	CLF	108900	85700	71500	91300	72700
	LFP	46.10	38.00	28.90	33.30	27.59
	%LF	6.14	5.01	3.88	4.11	3.15
	%UN	12.76	12.60	16.22	24.97	37.14
20-24	CLF	119000	131200	119600	138101	156701
	LFP	71.80	68.70	66.70	72.53	71.95
	%LF	7.93	8.84	8.48	8.58	7.95
	%UN	8.65	8.54	10.28	17.96	24.50
25-59	CLF	1085600	1094100	1130900	1178890	1188100
	LFP	94.42	93.91	94.03	93.13	91.46
	%LF	52.95	53.57	54.94	50.05	49.56
	%UN	2.77	1.63	1.37	1.81	3.79
60+	CLF	103301	96000	89401	81699	89000
	LFP	29.24	25.47	21.26	19.30	18.32
	%LF	6.86	6.12	5.18	4.54	4.37
	%UN	1.06	0.52	0.45	2.94	1.24
FEMALES						
14-19	CLF	75100	64000	53700	77000	63801
	LFP	31.90	28.80	22.20	28.94	24.84
	%LF	4.24	3.79	2.94	3.48	2.74
	%UN	11.32	11.87	17.50	39.22	50.78
20-24	CLF	73100	84700	80200	113200	133900
	LFP	43.20	43.20	44.20	57.87	60.92
	%LF	4.72	5.61	5.67	6.82	6.64
	%UN	7.52	9.09	10.35	24.82	37.04
25-59	CLF	344803	350995	398900	530005	612904
	LFP	28.01	28.34	31.33	39.91	45.59
	%LF	15.30	15.65	17.76	20.96	24.24
	%UN	2.06	1.54	1.98	6.92	10.88
60+	CLF	29802	23502	20801	26998	29401
	LFP	6.92	5.08	4.05	5.19	4.76
	%LF	1.86	1.41	1.15	1.47	1.36
	%UN	0.00	0.43	0.00	12.22	2.72

TABLE A6

SWEDEN

CIVILIAN LABOR FORCE (CLF), LABOR FORCE PARTICIPATION RATE (LFP), PERCENTAGE DISTRIBUTION OF THE LABOR FORCE (%LF) AND UNEMPLOYMENT RATE (%UN), BY AGE AND SEX

AGE AND SEX		1966	1970	1975	1980	1986
MALES						
16-19	CLF	15000	12100	13000	12600	10420
	LFP	59.00	52.80	59.00	55.30	44.06
	%LF	5.62	4.81	5.11	4.59	3.41
	%UN	2.7	3.3	4.2	6.5	4.3
20-24	CLF	25700	25900	23800	24000	24920
	LFP	79.10	76.70	82.70	84.50	81.49
	%LF	6.25	6.82	6.78	6.72	6.10
	%UN	1.7	2.1	2.1	3.5	6.3
25-54	CLF	145200	147901	153800	156700	161161
	LFP	96.82	94.80	95.17	95.42	95.29
	%LF	38.61	37.38	35.86	34.51	35.00
	%UN	0.8	0.9	0.7	1.1	1.9
55+	CLF	51700	50800	46700	43400	37600
	LFP	67.64	62.71	55.36	49.95	45.45
	%LF	11.34	10.41	8.70	7.90	7.34
	%UN	1.6	1.7	1.9	1.4	2.7
FEMALES						
16-19	CLF	13300	11200	11800	12200	10350
	LFP	54.70	50.90	56.20	55.80	46.02
	%LF	5.19	4.63	4.80	4.51	3.44
	%UN	5.1	5.1	7.1	8.8	4.0
20-24	CLF	19800	21000	20400	22200	23520
	LFP	64.60	65.20	73.70	81.60	80.69
	%LF	5.05	5.85	6.10	6.48	5.96
	%UN	2.3	2.4	3.5	3.9	6.1
25-54	CLF	84600	96900	116201	131399	146239
	LFP	57.40	64.22	74.28	82.94	89.82
	%LF	22.42	24.52	27.15	29.31	32.38
	%UN	1.7	1.3	1.4	1.6	1.8
55+	CLF	24000	25600	27100	29300	30030
	LFP	28.70	29.08	29.92	31.39	32.95
	%LF	5.51	5.58	5.49	5.97	6.36
	%UN	0.7	1.5	1.5	1.5	3.8

TABLE A7

UNITED KINGDOM

CIVILIAN LABOR FORCE (CLF), LABOR FORCE PARTICIPATION RATE (LFP), PERCENTAGE DISTRIBUTION OF THE LABOR FORCE (%LF) AND UNEMPLOYMENT RATE (%UN), BY AGE AND SEX

AGE AND SEX		1966	1970	1975	1980	1986
MALES						
16-19	CLF		1131955	1076840	1363200	1326969
	LFP		57.6	50.9	56.8	56.9
	%LF		4.41	4.14	5.09	4.82
	%UN		4.4	12.9	20.5	26.0
20-24	CLF		1949948	1701950	1816518	2056743
	LFP		91.0	86.6	85.6	84.1
	%LF		7.59	6.54	6.79	7.48
	%UN		3.1	8.5	10.2	21.5
25-54	CLF		9883886	10082663	10082795	10287948
	LFP		97.9	95.8	95.5	93.7
	%LF		38.48	38.72	37.67	37.39
	%UN		2.2	3.6	5.0	11.8
55+	CLF		3427185	3060233	2753155	2337327
	LFP		57.8	50.9	44.0	37.4
	%LF		13.34	11.80	10.29	8.50
	%UN		4.2	5.4	8.4	12.7
FEMALES						
16-19	CLF		981043	983107	1275753	1215788
	LFP		52.1	48.7	55.7	55.2
	%LF		3.82	3.78	4.77	4.42
	%UN		2.3	9.0	18.3	20.9
20-24	CLF		1271665	1214050	1390442	1638739
	LFP		60.2	63.8	67.8	69.9
	%LF		4.95	4.66	5.19	5.96
	%UN		1.3	4.4	8.2	15.9
25-54	CLF		5384075	6370230	6640005	7335514
	LFP		53.1	61.0	63.5	67.1
	%LF		20.96	24.46	24.81	26.66
	%UN		0.5	0.9	2.6	6.9
55+	CLF		1654986	1550072	1443618	1314457
	LFP		20.8	19.1	17.2	15.9
	%LF		6.44	5.95	5.39	4.78
	%UN		0.8	1.3	2.8	6.8

TABLE A8

USA

CIVILIAN LABOR FORCE (CLF), LABOR FORCE PARTICIPATION RATE (LFP), PERCENTAGE DISTRIBUTION OF THE LABOR FORCE (%LF) AND UNEMPLOYMENT RATE (%UN), BY AGE AND SEX

AGE AND SEX		1966	1970	1975	1980	1986
MALES						
16-19	CLF	412303	439698	517199	527698	428697
	LFP	56.79	56.71	59.86	60.50	56.75
	%LF	6.00	5.63	5.84	5.64	4.88
	%UN	10.48	13.62	18.68	17.30	18.17
20-24	CLF	613900	738704	835302	934195	887904
	LFP	87.00	85.35	84.90	85.71	85.40
	%LF	7.63	8.27	7.85	7.65	7.09
	%UN	3.60	6.48	12.94	11.52	10.12
25-54	CLF	3235800	3329920	3592400	3963900	4551900
	LFP	95.46	94.84	93.84	93.42	92.97
	%LF	42.49	40.75	39.85	37.91	37.87
	%UN	2.02	2.67	5.54	4.98	5.48
55+	CLF	894102	929197	893792	913794	876796
	LFP	54.57	53.88	47.85	44.50	39.47
	%LF	10.16	9.74	8.47	7.90	7.07
	%UN	2.74	2.89	4.53	3.30	4.08
FEMALES						
16-19	CLF	287998	325000	408498	440703	384302
	LFP	40.85	43.13	48.77	52.42	52.91
	%LF	4.31	4.28	4.70	4.76	4.39
	%UN	14.03	15.57	19.63	17.13	17.56
20-24	CLF	360100	489803	623200	739202	737996
	LFP	51.49	57.31	64.33	69.05	72.45
	%LF	4.47	5.60	6.00	6.15	5.93
	%UN	6.22	7.90	12.56	10.28	10.19
25-54	CLF	1616210	1822090	2188290	2794190	3526590
	LFP	45.88	49.68	55.02	63.84	70.64
	%LF	19.90	20.67	22.67	25.32	28.24
	%UN	3.59	4.48	7.45	5.95	5.84
55+	CLF	468992	521403	536490	590497	613908
	LFP	23.71	24.20	22.30	21.93	21.11
	%LF	5.06	5.06	4.62	4.68	4.52
	%UN	2.41	2.78	5.03	3.40	3.81

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