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abstract
Member states of the European Union are autonomous when it comes to the design of their social protection systems. However, they are committed by a Recommendation accepted by the European Council addressing the convergence of social protection objectives and policies. Beside that, it is expected that convergence of social protection systems could come about as a result of economic integration. In this paper we have examined whether such convergence has occurred during the past decades, using data on replacement rates and social expenditure ratios. We find a rather strong trend of relative convergence, but it does not follow that this trend is the result of the European integration.

JEL-classification: H53, and H55
Keywords: Social Protection, European Union

Introduction

This paper is concerned with the question whether social protection systems in the European Union have converged or diverged under the influence of the integration movement. Not only is convergence of social protection objectives and policies a specific aim of EU member states, the traditional opinion is that economic integration promotes progress in social protection across participating countries such that convergence of social protection systems follows more or less spontaneously. Theoretically, however, economic integration can be both beneficial and harmful to social protection systems. In the latter case, there may be convergence, but to ever-decreasing protection levels.
The paper discusses recent recommendations and statements issued by various bodies of the European Union regarding the desirability of convergence. Thereafter it summarizes various theoretical arguments according to which economic integration may contribute to convergence or to divergence. But the largest part of the paper is devoted to empirical analyses using data on gross replacement rates of unemployment benefits for 14 EU countries covering two decades, and data on the share of GDP spent on social benefits covering four decades. The latter also allow a comparison of EU members with non-EU members. Even though we observe a strong trend of what we call relative convergence of gross replacement rates as well as of shares of social benefit expenditures among the members of the European Union, it does not immediately follow that this trend is the result of economic integration.

Commitments of member states

Already the founding fathers of the EEC expected social progress to result from economic integration. Partly as a result thereof, the European Treaty of 1957 only offers a legal basis for harmonisation of social policies in relation to the free movement of labour. Regulations concerning the social protection of migrant workers have been accepted as early as 1957. The social protection systems, however, remained fully in the realm of national sovereignty. This has not changed since then. The Amsterdam Treaty of 1997 and the inclusion of the Social Protocol into the basic Treaty were a step forward in the social domain in general, but provide no basis for involvement of the European Union (henceforth: the EU) with social protection levels in the member states.
Still, member states have accepted a certain degree of commitment in terms of social protection. This commitment is embodied in two recommendations accepted by the European Council in 1992. The first recommendation, of June 1992, deals with common criteria concerning sufficient resources and social assistance in social protection systems (92/441/EEC). The second recommendation, of July 1992, explicitly addresses the "convergence of social protection objectives and policies" (92/442/EEC). Arguments given for convergence are:

- differences in social security may hamper the free movement of workers and exacerbate regional imbalances;
- convergence seeks to guarantee the continuation and stimulate the development of social protection within the context of the completion of the internal market;

- member states face common problems, such as ageing of the population, unemployment, changing family structures and poverty; common objectives must act as pointers to the way social protection systems are modified to take account of these problems.

Remarkably, this list does not mention that converging social protection systems can contribute to the creation of a level playing field on the internal market. In fact, the recommendation further stipulates broadly defined goals, but “without prejudice to the powers of the member states to establish the principles and organisation of their systems”. Finally, the monitoring is recommended of the progress achieved in relation to the convergence of social protection aims and policies across the Union.
The desirability of convergence of member states' policies has been reconfirmed in several reports of the European Commission, such as the White Paper on European Social Policy of 1994 and the recent reports on Social Protection in Europe. The 1998 Employment Guidelines, as a result of the Jobs Summit in Luxembourg at the end of 1997, can partly be seen as an implementation of the convergence strategy. A main line of action in these guidelines is to improve the employability of those out of work. This reflects a change in orientation of systems of social protection: a shift towards a more active policy designed to get people into employment rather than merely transferring income to those who are out of work. Though crucial in modernising social protection, this change in orientation does not have implications for benefit levels, coverage and eligibility criteria, *i.e.* for the scope and generosity of national systems.
Thus it can be concluded that a start has been made with a more active policy towards convergence of social protection in the Community, but that member countries still remain autonomous when it comes to the design and generosity of their systems (Goudswaard and Vording, 1996).

Possible effects of economic integration

According to a well-known argument economic development undermines traditional solidarities in family and local structures (Chassard and Quintin, 1993). And increased labour mobility also creates a need for employment-related insurances and for broader networks of solidarity. At the same time, higher levels of income also offer the possibility to develop a system of social security with adequate protection levels. At least the funding of such a system will become easier. So, according to this line of reasoning, economic development strengthens the need for an extended system of social protection as well as the opportunity to fund it. And, to the extent that European integration promotes economic development by reducing uncertainty, lowering risk premiums and improving investment opportunities, it may therefore contribute to the expansion of such systems.

On the other hand, it can be argued that economic integration may be harmful to national social security schemes. First, economic integration and a well-functioning internal market may stimulate migration. Migration as a result of relative price signals is economically efficient. A different situation arises however, when migration flows are provoked by differences in levels of social protection. In that case an adverse selection problem occurs:

individuals who expect to be net beneficiaries will be attracted to countries with generous social programs, while net contributors are deterred by the high tax burden in these countries. Consequently, the social protection systems there are confronted with increasing outlays as well as a narrowing financial base which will ultimately result in lower protection levels. This is a standard argument for centralising redistribution policies in an economic union (Lejour, 1996), although it can be shown that centralisation is not an inevitable consequence (Wildasin, 1991) and measures can be taken to limit and perhaps even eliminate the problem in practice.
Another problem may occur when lower levels of social protection translate into lower labour costs. In that case economic integration and higher transparency can damage the competitive position of countries with relatively generous protection systems *vis-à-vis* other countries. The former may react by lowering protection levels and, thus, set into motion a "race to the bottom". In the end social protection may indeed converge, but only at a very low level of protection. This argument, however, applies only to the extent that generous social protection raises labour costs. Although it may indeed be practically relevant under certain conditions, an international comparison clearly shows that many countries can afford relatively high levels of protection without risking their competitive position.

From the above brief discussion it can be concluded that theory does not clearly tell us whether economic integration leads to more or less social protection and whether there will be spontaneous convergence of social protection systems. The empirical analysis below is meant to shed some light on the actual development of social protection systems in the European Union and, more specifically, on the extent of convergence or divergence of these systems.

Some statistical evidence

Two sets of figures will be used here in an empirical analysis of the dynamics of social security systems. One set consists of social security expenditures as a percentage of GDP as derived from the OECD Economic Outlook of December 1998. The other set, obtained from the OECD data base, consists of replacement rates . Before reporting on the observed patterns, some properties of each of these variables will be briefly discussed.
Social security expenditures as a percentage of GDP give an indication of the financial effort to provide social protection. Although it is a useful indicator, it also raises some ambiguities in international comparisons. Countries often use different definitions of social security and of specific social risks, such as unemployment and disability. Moreover, benefits may be provided by public and/or market institutions. Still, market provision may be regulated by the national government such that it is equivalent to public provision. The true nature of these various forms of social protection is not always reflected adequately in national statistics.
A specific statistical problem is related to the tax treatment of social benefits. In some countries benefits are taxable, in others not. Benefits can also take the form of tax relief, for example child deduction. Adema (1999) has demonstrated the relevance of accounting for both the impact of tax regimes and private (mandatory or voluntary) arrangements on the share of GDP going to recipients of social benefits. Such a comprehensive approach

suggests that differences between levels of social effort in thirteen OECD countries are less pronounced than they seem to be in a restricted analysis.
Unfortunately, the data set applied below does not allow such a comprehensive approach. It must also be realised that changes in expenditure ratios do not necessarily reflect policy changes. They may simply be the result of ageing populations, or of changes in unemployment levels.

Comparative studies of social security systems have increasingly turned to using replacement rates as measures of the level of social protection in different countries. Replacement rates indicate which percentages of earnings are 'replaced' by social benefits when individuals become eligible for such benefits. But also this measure has its flaws (Whiteford, 1995). Some of the limitations are: 1) replacement rates are based on entitlement rules which differ between countries and often represent only the maximum payment in given circumstances; 2) benefits are often not fully indexed, implying that they represent a decreasing percentage of wages over time; 3) not all relevant benefits may be included; 4) also here taxation can blur the picture: net replacement rates may deviate strongly from gross rates. Bearing these limitations in mind, replacement rates are a useful indicator of the generosity of social transfer programs.

Relative variation of replacement rates
Table 1 presents figures on the gross replacement rates of unemployment benefits for 1979, 1989 and 1997 in 14 EU countries, *i.e*. for all present members of the EU, except Luxembourg. Note that the average values of the gross replacement rates listed here increase over time, thereby illustrating the significant rise in social protection that took place during the two decades covered. Another remarkable development is the very rapid growth of replacement rates in Greece, Italy and Portugal. As these countries had very low rates at the start of the period, this development must have contributed to convergence of replacement rates in the group as a whole.

Table 1 Gross replacement rates unemployment benefits*, 14 EU countries, 1979, 1989, 1997

	1979	1989	1997
Austria	29.3	29.3	31.0
Belgium	46.3	42.1	39.8
Denmark	49.8	51.5	66.4
Finland	26.5	33.9	35.5
France	24.0	36.9	36.5
Germany	29.9	27.6	27.1
Greece	6.7	9.2	22.3
Ireland	28.1	26.9	30.0
Italy	1.0	2.7	18.3
Netherlands	47.5	53.2	46.9
Portugal	7.4	31.7	33.4
Spain	21.4	33.8	31.7
Sweden	25.1	28.9	27.6
United Kingdom	23.8	17.6	18.8
Average	26.2	30.4	33.2
Coefficient of variation	0.56	0.46	0.37
Standard deviation	14.7	13.7	12.3

*) Benefits before tax as a percentage of previous earnings before tax as defined by legislated entitlements averaged across circumstances in which the unemployed person may be, taking as the two most significant cases the Average Production Worker (APW) level of earnings and two-third of the APW level of earnings.

Source: OECD data base; data provided for by Glenn Cooper

An objective test of convergence can be carried out using such statistical yardsticks as the variance and the standard deviation[1]. A drop in the value of these measures over time can be seen as a sign of convergence, and an increase as a sign of divergence. But below we also use another measure to test for tendencies of convergence or divergence. A property of the variance and the standard deviation namely is that their values rise with the average value of the data set to which they are applied.[2] This consideration is relevant in the present case, because of the growing average found in Table 1. To account for this, we also use here the so-called coefficient of variation, defined as the standard deviation divided by the value of the average of the corresponding data set. In order to distinguish the results of the two sets of criteria, we apply the term relative convergence (divergence) when observing a drop (rise) in the value of the coefficient of variation and the term absolute convergence (divergence) when using the statistical variance or standard deviation as a criterion.
The values of the coefficient of variation of the gross replacement rates given in Table 1 show that the relative variation of the replacement rates has decreased considerably over time. Thereby they confirm the result of the visual inspection. As indicated, this drop in the

[1] The variance of a set of observations is defined as the sum of the squared differences between the individual observations and their average, divided by the number of observations. The standard deviation is defined as the square root of the variance.

[2] In other words, when the data in a set are multiplied by a scalar larger than one to obtain a second set, the variance and the standard error of the second set are larger than those of the first, even though the relative variation has not changed.

coefficient of variation can be interpreted as a relative convergence of the replacement rates of unemployment benefits in the European Union during the period examined.
The corresponding values of the standard deviation have also been listed in the table. They clearly reflect a downward trend implying that, at least since the beginning of the 1980s, the gross replacement rates have converged also in absolute terms.

Relative variation of social benefit payments
Social benefits paid are a much broader variable than replacement rates of unemployment benefits, as they encompass all social benefits and also reflect the number of beneficiaries involved. Necessarily, they are less precise and specific, but, expressed as a percentage of GDP, they give a good indication of the financial effort a country makes in terms of social protection. Still, in an international comparison, the qualifications mentioned earlier must be kept in mind.
Annual figures on social benefits paid are available for a relatively long period, such that an international comparison can also include years before 1979. Table 2 presents data from 1960 to 1999 with ten-year intervals also including data relating to five non-EU countries.

Table 2 Social benefits paid as a % of GDP, 14 EU and 5 non-EU countries, 1960, 1969, 1979, 1989, 1999*

	1960	1969	1979	1989	1999
Austria	7.57	11.21	15.51	14.71	15.71
Belgium	11.35	13.70	20.85	20.62	21.16
Denmark	6.17	8.68	14.96	17.81	16.92
Finland	5.08	7.08	9.08	14.36	19.54
France	12.74	14.82	18.63	21.09	23.55
Germany	12.83	13.53	16.95	16.19	16.70
Greece	4.91	7.68	8.57	15.49	15.54
Ireland	4.07	7.76	11.64	14.62	13.64
Italy	9.50	11.93	14.08	17.61	19.70
Netherlands	7.17	12.92	19.93	18.26	17.75
Portugal	2.26	2.50	7.03	8.25	12.50
Spain	3.65	6.38	11.70	13.94	15.09
Sweden	6.09	8.19	14.28	16.29	15.82
United Kingdom	6.06	8.35	10.55	10.47	13.12
Average 14 EU countries	7.17	9.70	13.75	15.53	16.91
Australia	4.92	5.06	9.23	9.62	12.55
Japan	3.75	4.46	9.84	10.94	14.51
Norway	9.34	11.87	13.36	15.40	15.35
Switzerland	5.94	8.54	12.93	13.36	20.07
United States	5.72	7.23	10.72	11.33	13.75
Average 5 non-EU countries	6.28	7.46	10.99	12.13	15.25

* data relating to 1999 are estimates

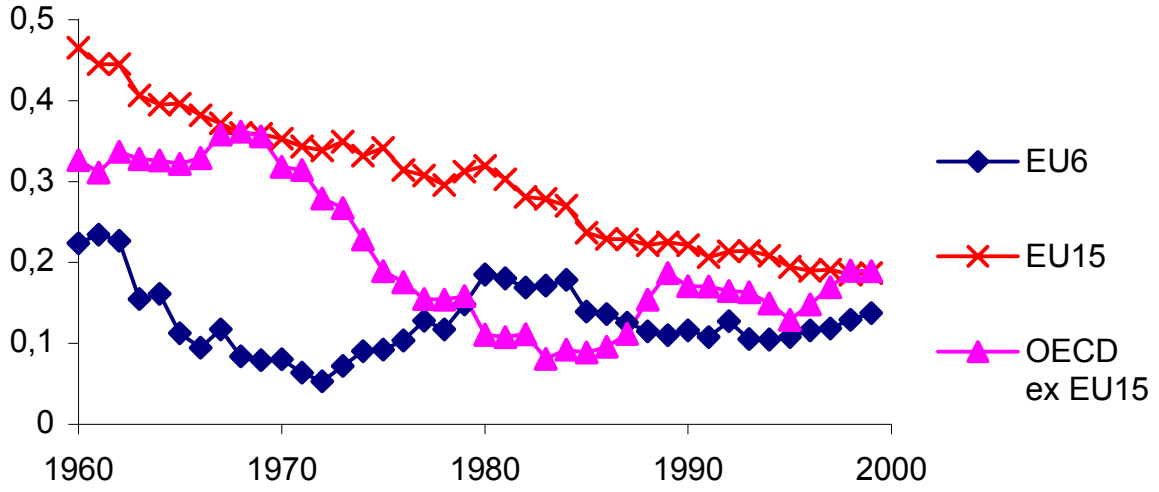
Source: OECD Economic Outlook, December 1998; see for details Annex 1

The significant rise in social protection observed inTable 1 for the replacement rates since 1979 stands out also in Table 2. The latter shows that expenditures on social protection have in fact been rising rapidly already since 1960 in EU counties as well as in non-EU countries. Another similarity concerns the very high growth rates in countries with relatively low levels of social expenditure in early years, such as Greece and Portugal. Still, as can be expected, there are also some differences. A country like Italy, with a remarkably low replacement rate in 1979 does not show a clearly deviating performance in terms of social expenditures. And, *vice versa*, a country with relatively low social expenditures, such as Finland in 1979, has a replacement rate that is close to average. Similarly, Denmark's high replacement rates are not reflected in its social spending pattern.
The following tentative conclusions can be obtained from the two tables. First of all, the rapidly increasing figures in both tables suggest that, in accordance with general expectation, higher levels of social protection go together with higher incomes per head. In fact, social protection appears to be a so-called luxury good, in the sense that expenditure grows more than proportionally, expressing itself in higher shares of income spent on social protection as income grows. Further, European countries with relatively low incomes per head tend to catch up rapidly in terms of protection levels. But, of course, the rise in the shares of income spent on social protection cannot go on forever; at some point saturation will set in and the growth of social expenditures will level off. In fact, figures for later years in Table 2 suggest that some European countries may already have reached that stage. We can also observe that national preferences for social protection seem to differ substantially. Especially Anglo-Saxon countries do not seem to be prepared to sustain the high protection levels prevailing in other countries with the same level of income. This may well be another expression of cultural differences within the group of OECD countries.

Figure 1 presents the development of the coefficients of variation of social benefits paid as a percentage of GDP between 1960 and 1999 for three country groups. The first group consists of the present member states of the EU[3], except Luxembourg and Denmark for which sufficient data are lacking. Although the term is not literally correct, this group will from here on be referred to as the EU15. The second group comprises other OECD members[4]. It has been added in order to allow a comparison of the development in EU countries with non-EU countries. The third group consists of the six countries that founded the forerunner of the European Union, the European Economic Community, in 1957. These countries are Belgium, France, Germany, Italy, Luxembourg and the Netherlands. Although Luxembourg could not be included for lack of data, this group will be referred to as the EU6.

[3] The present member states of the European Union are the countries listed in Table 1 plus Luxembourg.
[4] This group consists of Australia, Japan, Norway, Switzerland and the United States.

Figure 1 Variation coefficients of social benefits paid as a % of GDP, 1960-1999, selected country groups



Source: see below table 2

The graph shows that the relative variation of the shares of income spent on social benefits in the EU15 has decreased quasi-continuously between 1960 and 1999. The rate of decrease of the coefficient of variation was high during the 1960s and 1980s and only moderate during the 1970s and 1990s. Still, over the entire period, the coefficient of variation was more than halved, reflecting a strong pattern of relative convergence.

Evidently, this strong convergence among the EU15 cannot be attributed solely to membership of the European Union, if only because only six countries were members during the whole period, while the others joined later[5]. During the 1960s, when the tendency of relative convergence was particularly strong, most of the present members still had little reason to expect that they would eventually be part of the Union. Further, it appears that the founding members (the EU6) showed less relative convergence over the decades than the EU15, and even experienced considerable relative divergence during the 1970s. And finally, also the coefficient of variation of the non-EU countries fell considerably over the period as a whole, even though economic integration did not play a role here.

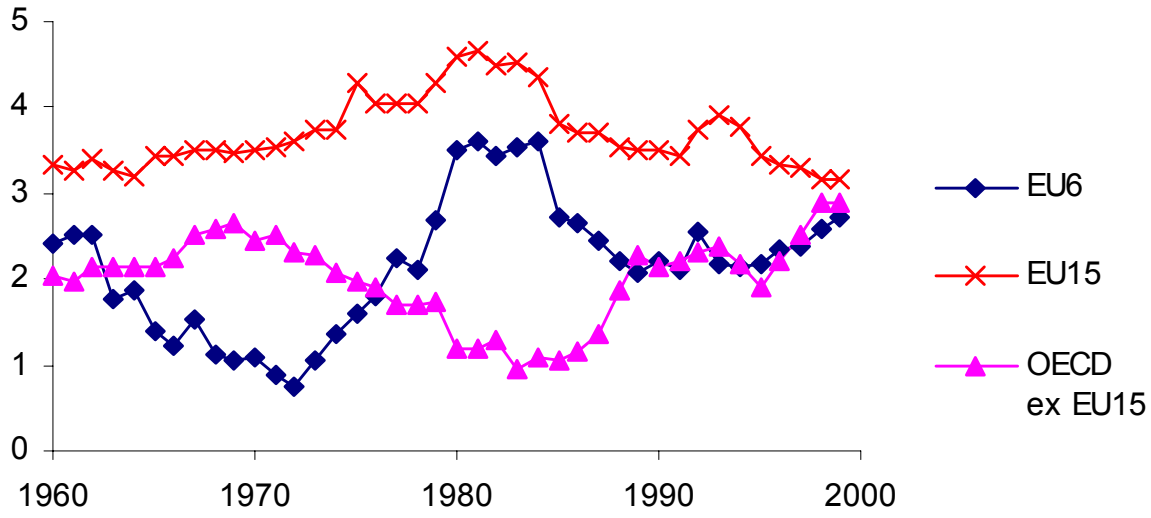
Figure 1 also suggests that the EU6 have been relatively homogeneous from the start in terms of social benefits paid, resulting in relatively low values of the coefficient of variation since 1960. In fact, if the importance a society attaches to social protection is indeed an exponent of its culture, it is not surprising that precisely those European countries displaying a relatively high homogeneity in terms of social protection were the first to agree on a project of integration.

[5] Belgium, France, Germany, Italy, Luxembourg and the Netherlands founded the European Economic Community in 1957. Denmark, Ireland and the United Kingdom joined in 1972, followed by Greece in 1981, Portugal and Spain in 1986 and Austria, Finland and Sweden in 1995.

Absolute variation of social benefit payments

In this subsection we examine to what extent the development of the coefficient of variation observed above was driven by the development of the standard deviation[6]. For that purpose we use Figure 2 which presents the annual values of the standard deviation between 1960 and 1999 for the same country groups as those appearing in Figure 1.

Figure 2 Standard deviation of social benefits paid as a % of GDP, 1960-1999, selected country groups



Source: see below table 2

It can immediately be seen that the strong, quasi-continuous relative convergence of the ratio of social benefits in the EU15 since the 1960s apparently has not been caused by an absolute convergence of these ratios. For this group of countries the standard deviation at the end of the period of observation appears to be approximately the same as it was at the beginning. And the non-EU countries -which also displayed relative convergence- even appear to diverge in absolute terms. So the relative convergence for these two groups over the period 1960-1999 is the result of the considerable rise in expenditures on social benefits in relation to GDP.

However, Figure 2 also shows that this conclusion does not apply to all subperiods. For, during the period after 1980, absolute convergence of social benefit ratios occurred in the EU6 as well as in the EU15. And it may be significant that this phenomenon -also observed in Table 1 for the unemployment replacement rates, an entirely different indicator- coincides with the considerable strengthening of European economic integration during the same period. For example, it seems unlikely that present-day EU members can let their social policies diverge as strongly in response to an external shock as the EU6 still could after the oil crisis of 1973. And it is also worth noting that, in contrast to the EU members, the non-EU countries have been on an absolute diverging trend since 1980. Taken together, these observations suggest that European integration may well have contributed to an absolute convergence of social protection among the participants during the past two decades.

Concluding remarks

In this paper we have examined the extent in which convergence of social protection systems has occurred in the European Union during the past decades. We used data on gross replacement rates of unemployment benefits in the countries of the European Union since 1979 and annual data on social benefit payments as a percentage of GDP in the EU member countries as well as in five non-EU countries. The latter data set covers the four decades since1960. We found indeed a considerable drop in the coefficients of variation of both variables. In the terminology adopted here, these developments point to a strong relative convergence in the sphere of social protection. Still, some additional comments are in order.

First of all, it should be noted that tendencies of convergence or divergence of shares of expenditures on social protection within groups of countries are a natural result of a few well-known, general phenomena, apart from economic integration. Such phenomena are: the luxury-good character of social protection, varying rates of growth of income per head and varying preferences for social expenditures.

Consider two countries with similar preferences and growth rates, but different levels of income per head. Suppose that the poorer country, in contrast to the other country, has not yet reached the level of income where social security is mostly provided through public channels. An absolute divergence of public expenditures on social protection will result. It is also easy to see that two countries with similar preferences and incomes, but with different growth rates will also tend to diverge. And when two countries have different levels of income and the poorer country grows faster, the two are likely to show convergence.

Varying preferences for social protection in combination with similar growth rates and levels of income per head can cause convergence as well as divergence. For example, when a poor country has a strong urge to raise its relatively low level of protection, it may gradually bridge the gap with a richer country without that urge. Such a situation is likely to occur when the richer country has reached its level of saturation in terms of social expenditures. A tendency of convergence will result. But the reverse development may occur as well. All this goes to say that convergence of social protection systems among EU countries may result from factors other than economic integration.

Secondly, the observed strong convergence of social protection occurred in relative terms, as expressed by the coefficient of variation. This measure relates the standard deviation to the average of a data set, so it falls when the value of the average rises. This is of course precisely what happened in the past decades to variables expressing the size and generosity of social protection systems in OECD countries. In fact, it has been demonstrated above that the values of the social benefits paid as a percentage of GDP did not show any convergence in absolute terms over the past four decades.

Further, the EU6 -the countries that have been involved in the integration movement from the start- display no clear relative convergence of the rates of social benefits paid over the period 1960-1999. On the other hand, the corresponding coefficients of variation calculated for non-EU members of the OECD appear to be much lower in the 1990s than they were in the 1960s. So the latter countries, although they are scattered all over the world and not involved in economic integration, show more relative convergence than the EU6.

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[6] Recall that the coefficient of variation is defined as the standard deviation over the average.

But these qualifications apply to the entire forty-year period between 1960 and 1999. It should be pointed out namely, that the last two decades -other than the 1960s and 1970s- do indeed show signs of relative and absolute convergence of social benefit systems in the European Union. These tendencies can be observed in both data sets examined here: the gross replacement rates of unemployment benefits and the shares of social benefit expenditures in GDP. It is perhaps significant that they coincide with a period during which the process of economic integration in Europe was much intensified.
It is still too early to conclude categorically that convergence of social benefit systems as a result of the European integration movement has set in. And even if the tendency of convergence would appear to be structural, there may be other factors than economic integration at work. Still, it is very well conceivable that a comprehensive process of economic integration, as takes place now in Europe, promotes convergence through the intensified contacts between participating countries. Especially successful countries may have a demonstration effect on other member countries. Depending on the generosity of the systems of such model countries, the tendency may then be upward or downward oriented. In this way the proclaimed objective of convergence of social policies in the European Union would come about as a spontaneous development and not so much as a result of pertinent decisions.

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Annex 1 Data Social Benefits as % of GDP, 1960-1999

countries	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Austria	7.57	7.59	8.26	8.68	8.91	8.96	9.12	9.84	10.53	11.21	12.25	12.97	13.74	13.91	13.30	13.55	13.87	14.12	14.98	15.51
Australia	4.92	5.25	5.16	5.54	5.33	5.31	5.61	4.85	4.73	5.10	5.43	5.54	6.26	6.47	6.91	8.45	8.97	9.50	9.44	9.23
Belgium	11.35	11.00	11.33	11.45	10.89	12.41	12.77	13.00	14.03	13.70	14.08	14.23	14.87	15.43	15.94	18.76	19.27	19.99	20.34	20.85
Canada	8.02	6.85	6.73	6.48	6.31	6.17	6.14	7.09	7.47	7.59	8.11	8.76	9.40	9.05	9.38	10.29	10.11	10.48	10.77	9.85
Denmark	6.17	6.19	6.32	6.66	6.21	6.73	7.23	7.99	8.65	8.68	10.41	10.87	10.93	10.67	11.59	13.38	13.13	13.75	14.53	14.96
Finland	5.08	5.40	5.69	5.73	5.78	6.24	6.80	7.38	7.46	7.08	7.03	7.62	7.84	7.32	7.58	8.24	8.90	9.70	9.88	9.08
France	12.74	13.33	14.14	13.58	13.90	14.22	14.36	14.49	14.78	14.82	14.80	14.79	14.98	15.14	15.54	17.41	17.33	17.73	18.48	18.63
Germany	12.83	12.78	12.88	12.99	13.02	13.43	13.77	14.96	13.97	13.53	13.07	13.21	13.71	13.73	14.86	17.92	17.71	17.66	17.25	16.95
Greece	4.91	5.01	5.73	6.12	6.26	6.82	7.09	7.76	8.03	7.68	7.64	7.69	7.26	6.47	6.85	7.13	7.45	8.23	9.01	8.57
Ireland	4.07	5.79	5.77	6.46	6.32	6.46	7.46	7.26	7.61	7.76	8.61	9.16	8.79	8.96	10.13	12.28	12.60	11.66	11.36	11.64
Italy	9.50	9.32	9.78	10.31	10.55	12.04	12.21	11.62	12.18	11.93	11.94	12.63	13.46	13.13	12.79	14.55	14.36	13.89	14.84	14.08
Japan	3.75	3.72	3.86	4.19	4.32	4.69	4.68	4.48	4.50	4.46	4.63	4.81	5.14	5.15	6.18	7.74	8.49	8.91	9.43	9.84
Netherlands	7.17	7.22	7.72	9.32	9.38	10.52	11.30	11.70	12.39	12.92	13.37	14.28	15.03	15.31	16.18	17.64	17.70	18.41	19.24	19.93
Norway	9.34	9.66	10.27	10.53	10.52	10.65	11.00	11.51	11.67	11.87	11.53	11.72	11.47	11.29	11.39	12.30	12.74	12.76	13.34	13.36
Spain	3.65	3.39	3.14	3.78	4.81	5.10	5.17	5.65	6.15	6.38	6.65	7.42	7.52	7.63	7.65	8.32	8.97	9.31	10.73	11.70
Sweden	6.09	6.12	6.20	6.51	6.37	6.52	6.82	7.54	8.03	8.19	8.23	8.88	9.27	9.24	11.19	11.29	12.11	13.48	14.20	14.28
Switzerland	5.94	6.15	6.24	6.22	7.02	7.17	7.25	7.51	7.51	8.54	8.35	8.26	7.85	9.82	10.31	12.09	12.88	13.12	13.07	12.93
Portugal	2.26	2.34	2.45	2.58	2.72	2.81	2.91	2.70	2.52	2.50	2.55	2.56	3.54	4.05	4.47	6.17	7.06	7.18	7.38	7.03
united kingdom	6.06	6.23	6.53	6.96	6.73	7.20	7.36	7.89	8.40	8.35	8.36	8.28	9.03	8.63	9.39	9.71	10.18	10.29	10.60	10.55
United States	5.72	6.32	6.06	6.07	5.88	5.85	5.95	6.69	7.03	7.23	8.29	9.06	9.19	9.38	10.32	11.93	11.68	11.19	10.69	10.72

countries	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Austria	13.10	13.47	13.67	13.79	14.09	14.50	14.66	15.05	14.93	14.71	14.51	14.43	14.51	15.11	15.33	15.54	15.58	15.49	15.79	15.71
Australia	9.06	9.04	9.61	10.79	10.89	10.77	10.78	10.39	10.04	9.62	10.46	11.73	12.55	12.84	12.74	12.90	13.11	12.87	12.71	12.55
Belgium	23.39	25.22	25.14	25.86	25.28	22.41	22.11	22.02	21.12	20.62	20.55	21.24	21.51	21.79	21.45	21.49	21.62	21.42	21.29	21.16
Canada	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Denmark	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	16.97	17.81	17.86	18.38	18.89	19.67	21.23	20.34	19.73	18.80	17.86	16.92
Finland	11.89	12.09	13.29	14.02	13.97	14.76	15.26	15.37	14.75	14.36	15.75	19.64	23.68	25.23	25.08	23.52	22.61	21.22	19.92	19.54
France	19.15	20.28	21.23	21.52	21.77	22.07	21.91	21.57	21.42	21.09	21.24	21.76	22.41	23.63	23.28	23.25	23.41	23.62	23.51	23.55
Germany	17.06	17.57	17.83	17.35	16.73	16.50	16.31	16.59	16.51	16.19	15.67	16.64	17.08	17.89	17.66	17.85	17.61	17.37	17.12	16.70
Greece	9.47	11.28	13.43	13.73	14.23	15.37	15.40	15.49	15.02	15.49	15.35	15.21	15.16	15.61	15.44	15.76	15.45	15.27	15.43	15.54
Ireland	13.43	14.38	16.32	16.95	16.77	17.16	17.61	17.33	16.64	14.62	14.27	15.17	15.73	15.79	15.69	15.05	14.98	14.45	13.84	13.64
Italy	14.19	15.79	16.34	17.31	16.82	17.17	17.24	17.35	17.35	17.61	18.20	18.31	19.34	19.54	19.50	18.90	19.23	19.61	19.46	19.70
Japan	10.06	10.53	10.96	11.23	10.96	10.90	11.19	11.56	11.29	10.94	11.35	10.82	11.28	11.90	12.47	13.37	13.51	13.78	14.14	14.51
Netherlands	20.70	21.07	21.56	21.01	20.09	19.50	19.33	19.73	19.59	18.26	19.61	19.98	20.53	20.95	19.73	19.36	18.79	18.98	18.04	17.75
Norway	11.33	11.63	12.03	12.37	12.09	11.85	12.73	13.18	14.49	15.40	15.95	16.37	17.06	16.93	16.37	15.80	15.18	14.97	15.26	15.35
Spain	12.36	13.71	13.56	13.96	13.89	14.33	13.96	13.81	13.87	13.94	14.40	15.24	16.09	16.57	16.46	15.74	15.72	15.36	15.19	15.09
Sweden	14.47	15.18	15.20	15.30	14.68	15.01	15.36	15.60	16.37	16.29	16.32	17.26	18.56	19.96	19.28	18.09	17.49	16.72	16.26	15.82
Switzerland	12.01	11.91	12.77	13.19	13.54	13.36	13.53	13.63	13.74	13.36	13.39	14.20	15.58	17.08	17.21	17.40	18.51	19.23	20.03	20.07
Portugal	7.21	8.00	8.21	8.20	8.16	8.06	8.20	8.46	8.46	8.25	8.75	9.67	10.23	11.13	11.78	12.27	12.60	12.62	12.52	12.50
united kingdom	10.56	11.81	12.65	12.63	12.76	12.70	12.85	12.00	11.07	10.47	10.69	12.04	13.37	14.03	13.85	13.66	13.42	13.00	13.15	13.12
United States	11.41	11.58	12.44	12.36	11.48	11.50	11.55	11.37	11.25	11.33	11.83	12.19	13.65	13.83	13.64	13.79	13.86	13.70	13.65	13.75

data relating to 1999 are estimates

Source: OECD Database

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