# Flexicurity as a model for European labour markets

The authors of this article are José González Mínguez and Carlos Vacas of the Directorate General Economics, Statistics and Research.

## *Introduction*

Beyond cyclical fluctuations, the low average rates of increase in economic activity in the countries of the former EU 15 since the early 90s suggests there are structural obstacles restricting growth potential. This economic sluggishness restricts the gains in well-being for European citizens measured by the rate of increase of per capita income, which led to an interruption in the convergence of the level of this variable relative to the US economy that had been in train since the post-war period. To improve these results calls for structural reforms to promote the use of the labour factor and to raise productivity growth rates, a need which has become more pressing amid growing global competition, rapid technological change and population ageing. European economic policymakers formally recognised this challenge when they launched the Lisbon Agenda at the March 2000 European Summit, a centrepiece of which is joint and consistent reforms of the institutional design of labour markets and of social protection systems.

These reforms particularly require more flexible working arrangements, so that companies may be more adaptable to a constantly changing environment, and an overhaul of social protection systems, so they may generate the appropriate incentives for individuals to take up paid work and protect those who really need it.

Despite the long-term welfare benefits to be had, the reforms often entail costs for specific groups of individuals; accordingly, their implementation occasionally meets some degree of opposition. Frequently, the final outcome is partial reforms, which do not achieve their goal: namely, that the final design of labour markets and of social protection systems should be a consistent whole that allows high rates of employment to be achieved. On the contrary, partial reforms have occasionally given rise to labour markets that combine a high degree of protection for jobs that already exist with the presence of obstacles to specific groups of individuals joining the labour market.

Against this background, and across the range of the various Member States' labour markets, it is worth paying particular attention to those that have been most successful in terms of obtaining higher employment rates, so as to explore the extent to which their institutional arrangements may be a valid example for the other members. It is believed this model can be found in the Nordic economies, and particularly in Denmark. The Danish labour market is characterised by the coexistence of a high degree of flexibility (obtained through relatively low dismissal costs) and a likewise high level of social protection (via generous unemployment benefits, albeit subject to a high degree of conditionality). The combination of flexibility and security, which when applied to the labour market might appear in principle to be opposites, has given rise to the term "flexicurity". Under this term, the European Council has, by the end of 2007, to adopt a set of common principles to underpin the new Employment Guidelines to be approved in 2008.

This article examines the Danish flexicurity arrangements and assesses the extent to which labour market reforms in other European countries may draw on them. These labour markets are characterised in the second section on the basis of the institutional aspects that may determine their results in terms of employment. The third section describes the Danish flexicurity model. Section 4 analyses empirically the relationship between institutional characteristics and

COMPARISON BETWEEN THE EUROPEAN AND US LABOUR MARKETS (2005) TABLE 1

| | Employment rates: total and by group (a) | | | | | Hours worked annually |
|---|---|---|---|---|---|---|
| | Total | Male | Female | Young (b) | Elderly (c) | |
| EU 15 | 66.6 | 73.8 | 59.3 | 40.8 | 45.6 | 1,650.7 |
| Euro area (d) | 64.7 | 72.7 | 56.7 | 37.4 | 41.5 | 1,660.3 |
| United States | 71.5 | 77.6 | 65.6 | 53.9 | 60.8 | 1,804.0 |

SOURCES: OECD and Banco de España.

a. Employed as proportion of working age population in each group.
b. Includes those between 15 and 24 years of age.
c. Includes those between 55 and 64 years of age.
d. Euro area 12.

LABOUR MARKET HETEROGENEITY IN THE EU15 (2005) TABLE 2

| | Total employment rates, by sex and by age | | | | | |
|---|---|---|---|---|---|---|
| | Total (15-64) | Men (15-64) | Men (25-54) | Women (15-64) | Young (15-24) | Elderly (55-64) |
| Dispersion (a) | 5.2 | 3.9 | 2.2 | 8.1 | 13.5 | 11.4 |

SOURCES: OECD and Banco de España.

a. Dispersion is measured by the standard deviation in the sample.

employment testing the virtues of the Danish labour market arrangements. The article concludes with some final considerations.

## *European labour markets: performance and institutional arrangements*

As can be seen in Table 1, the use of the labour factor in both the former EU 15 and in the euro area is comparatively lower than in the United States, in terms both of the rate of employment and of the number of hours worked. The difference is greater for those groups traditionally less represented in employment, i.e. women, young people and the elderly. Moreover, this poorer relative performance of the European labour market in aggregate terms masks very marked differences across the different countries. In particular, the dispersion of employment rates is especially notable among the three aforementioned groups (see Table 2).

Identifying the causes behind these differences is a complex task in view of the manifold potential determinants. On one hand, it has been argued [Blanchard (2004)] that the fewer hours worked in Europe in comparison with the United States is due to European citizens' greater preference for leisure time. On the other hand, however, the scale of the differences observed in the use of the labour factor between the United States and Europe and, within the latter, across its different members, suggests that the institutional characteristics of each labour market must play a relevant explanatory role. Notable among such characteristics are employment protection legislation (EPL), unemployment benefits, active labour market policies, lifelong learning, product market regulation, taxation of the labour factor, trade union density and the degree of centralisation and coordination of collective bargaining.[1]

1. In the comparison between the United States and Europe, this argument has been convincingly set out by Prescott (2004), who focuses on the differences in taxation on earned income.

EPL approximates the difficulty of hiring and firing under labour market regulations. Conceivably, the effect of a high level of EPL on employment rates is ambiguous since, on one hand, it means that the dismissal of current employees is costly while, on the other, it makes companies more averse to take on new staff, precisely to avoid incurring such costs in the future.[2] Indeed, the empirical evidence is not conclusive concerning the impact of EPL on employment [see, for instance, Boeri (1999)], although it does suggest that it differs for different working population groups; thus, while it is favourable for the employment rates of middle-aged male workers, it tends to reduce those of individuals who face greater difficulties joining the labour market, such as women, young people or the long-term unemployed.[3] EPL differs frequently according to the type of contract and is usually more stringent for permanent employees than for temporary workers, giving rise to a dual labour market segmented between both groups of employees.

As opposed to the job protection that EPL offers, unemployment benefits protect workers in the event of becoming unemployed, serving to mitigate the negative impact on their income. Moreover, this variable may have a favourable effect on productivity, enabling unemployed workers to seek jobs more suited to their specific skills. However, benefits will foreseeably tend to reduce labour supply, by adversely affecting the incentives to return to a position of remunerated employment. These effects depend on the maximum duration of the benefit receipt period, on the level of replacement rates (or the ratio of benefits to the wage received previously) and on the conditions governing benefit eligibility and its subsequent maintenance (such as total or partial forfeit in the event of turning down a job offer).

Active labour market policies (which include, among other measures, training for the unemployed, job-search assistance programmes and subsidies for hiring the long-term unemployed) help match labour supply and labour demand. Accordingly, they may be expected to exert a positive impact on employment rates.[4] The same may be said for the lifelong learning by workers during their working life, since it increases the human capital of the employed, thereby raising the availability, within companies, of workers with the required skills.

The literature has identified a series of channels through which product market regulation may affect employment in the long run. In particular, a regulatory environment more geared to competition boosts labour supply to the extent that, by exerting downward pressure on the level of prices, it leads real wages to rise. Moreover, entry by new competitors tends to expand activity and, therefore, labour demand.

The tax wedge, or the difference between the gross labour costs borne by employers and the net labour income received by employees, adversely affects labour supply by influencing the incentives to accept a job and the choice of the number of hours worked. These effects would be especially relevant in the case of unskilled, low-income workers (in particular young people and women) who, in the event of high tax wedges, may respectively choose to extend their stay in the educational system or remain at home. This is why certain tax reforms rolled out in recent years have been aimed at these groups, since they are, moreover, those experiencing the highest unemployment rates.

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**2.** It has further been argued that a high degree of EPL may be favourable in some respects in terms of labour productivity, since a durable working relationship with the same employer leads to greater incentives to invest in employee training. **3.** See, for example, Jimeno and Rodríguez-Palenzuela (2002) for the case of youth employment. **4.** There are, however, counteracting effects. First, participation in these programmes improves individuals' skills and, therefore, their prospects of finding a job. And further, it has been argued that the threat of being obliged to participate in an activation programme may drive the unemployed to seek work more intensely. But, on the other hand, it is possible that programme participants will devote less time to job-seeking.

Trade union density, as a variable that approximates employees' bargaining power, may adversely affect employment if it translates into excessive wage demands or into the introduction of high minimum wages. Nonetheless, the capacity of this variable to capture actual trade union power is limited, insofar as the scope of collective bargaining agreements extends automatically to all employees. Finally, the literature has also identified the degree of coordination of wage bargaining as another determinant of employment, finding that such coordination among social agents is conducive to employment.[5]

All these institutional aspects potentially determining the performance of each country's labour market are measured in the literature with greater or lesser accuracy through various indicators. However, it should be borne in mind that such indicators approximate what is a complex real situation; accordingly, due caution is required in interpreting them. Having regard both to the specific values these indicators adopt and to the labour market results in terms of employment, various authors have attempted to classify the European countries in different models. Evidently, any such classification tends to be a simplification, as it fails to capture – as indicated – the complexity of the institutions in place in each country, which is why there is no unanimity as to the economies making up each model. Specifically, Sapir (2005) considers four models, namely the Nordic (Denmark, Sweden, Finland and the Netherlands), Anglo-Saxon (Great Britain and Ireland), Continental (France, Germany, Austria, Belgium and Luxembourg) and Mediterranean (Greece, Italy, Portugal and Spain) models.[6]

For each of the four models, Chart 1 depicts the simple means of the indicators that measure the various above-mentioned institutional aspects, while Chart 2 plots the employment and unemployment rates of different groups and the long-term unemployment rate.

The information in the charts tends broadly to confirm Sapir's classification. Generally, the Nordic model corresponds with the highest replacement rates and the highest spending levels, both in active labour market policies and in lifelong learning. The financing of these policies leads to relatively high tax wedges. Moreover, the regulation of both labour and product markets is among the most lax on the continent. Finally, trade union density is, by far, the highest, and the degree of coordination of collective bargaining is high. In terms of results, this model posts the highest employment rates, with the highest labour market inclusion for women, the young and the over-55s, and the lowest presence of long-term unemployment.

The Anglo-Saxon model is characterised, above all, by low levels of market regulation. Net replacement rates are at an intermediate level (although in gross terms they are the lowest) and spending on active labour market policies and on lifelong learning is relatively high, despite which the tax wedges of these countries are the smallest. Their employment rates are similar to those of the Nordic economies.

In the Continental-model countries, market regulation is strict, net replacement rates and spending on active policies (though not on lifelong learning) are relatively high and the labour

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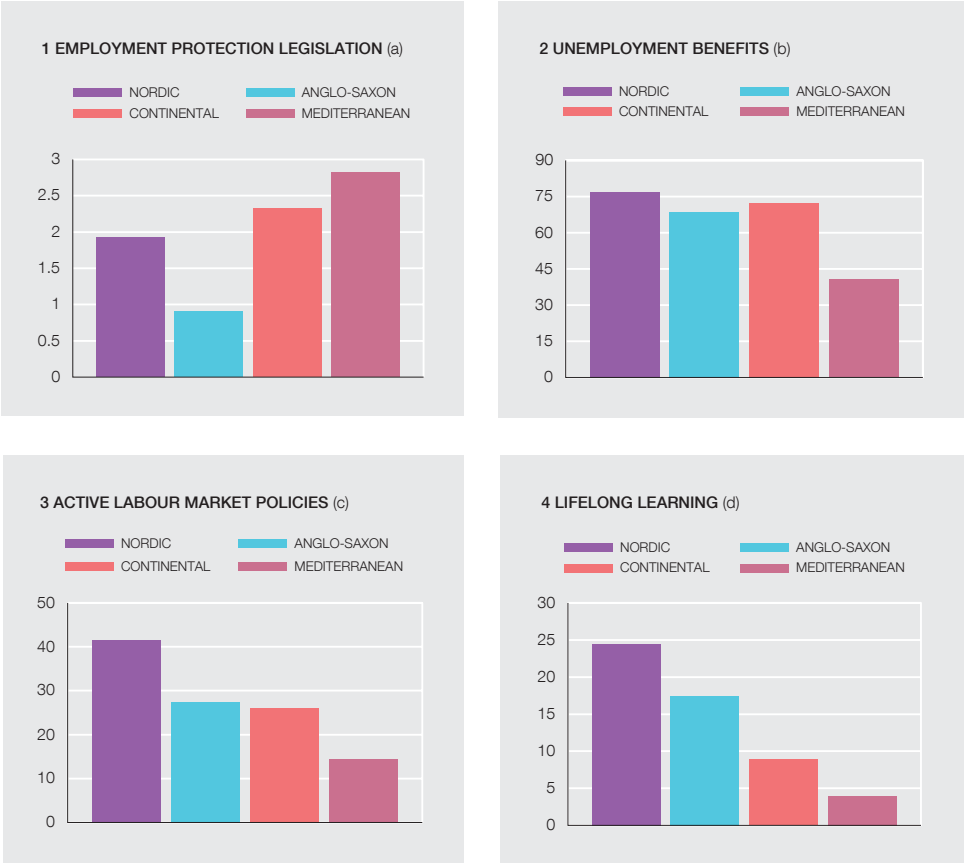
**5.** Further, regarding the degree of centralisation of bargaining, it has been found that, compared with bargaining at the economy-wide or at the individual firm level, bargaining at the intermediate levels is to the detriment of employment. It has been argued that, in fully centralised bargaining, the unions internalise to a greater extent the effects of their wage demands on employment in the economy as a whole and, in bargaining at firm level, wages approximate more to marginal productivity [Calmfors and Drifill (1988)]. **6.** Heipertz and Ward-Warmedinger (2007) compile a different classification in which the Netherlands does not belong to the Nordic model, and they divide the group of countries in Sapir's Continental and Mediterranean models into reformers (Austria, Belgium and Spain, along with the Netherlands) and non-reformers (France, Germany, Greece, Italy, Portugal and Luxembourg). Compared with the Sapir classification, Gaard (2005) includes Finland in the Continental group and France in the Mediterranean group.

INSTITUTIONAL CONFIGURATION OF EUROPEAN LABOUR MARKET MODELS CHART 1




SOURCES: OECD, Eurostat and Banco de España .

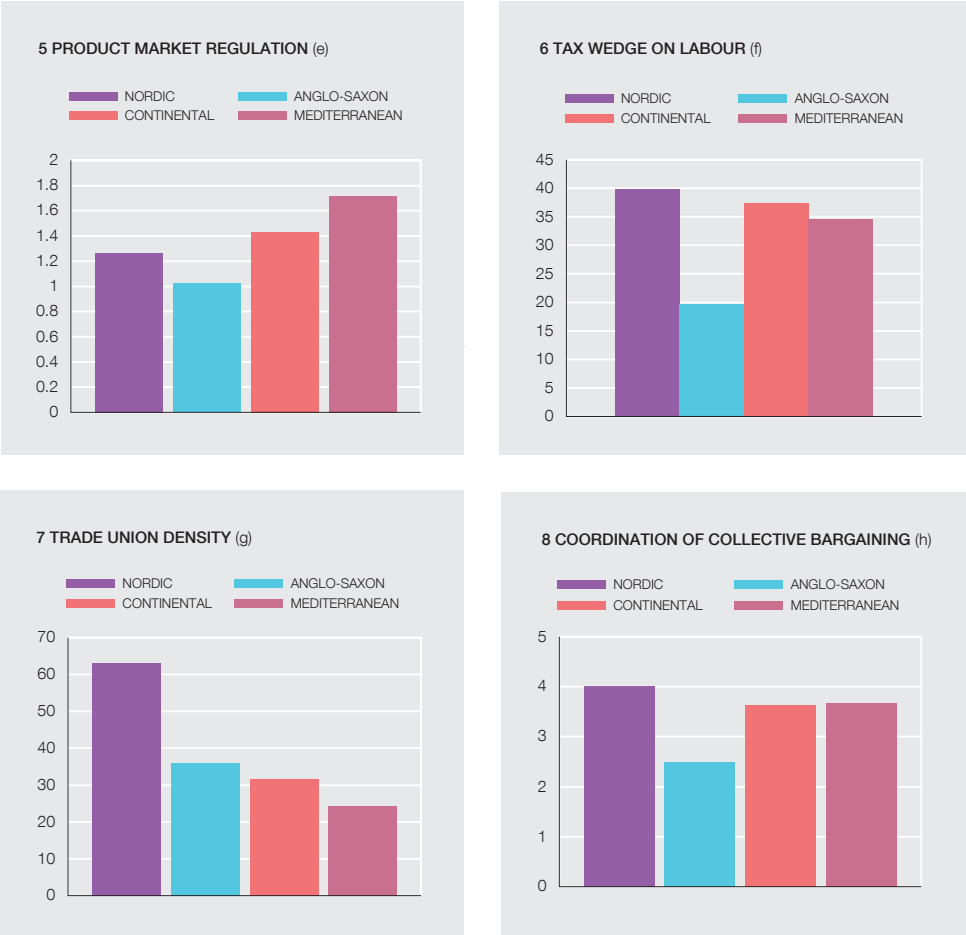
a. OECD. *Employment Statistics Database*, 2003. Ranges from 0 to 6, so that a higher value denotes a higher degree of protection.
b. OECD. *Benefits and Wages*, 2004. Net replacement rates over a period of five years' unemployment and including social assistance. The average is taken for four household situations (a single individual with one or two children and a couple where only one of the two works, with one or two children) and for two income levels (67% and 100% of the average).
c. OECD. *SOCX Social Expenditure Database*, 2003. Spending per unemployed individual, expressed as a percentage of per capita GDP.
d. Eurostat, 2005. Percentage of the population aged 25-64 who state they have received training or education in the four weeks prior to the *European Union Labour Force Survey*.

factor tax wedge is among the highest. This model shows lower employment levels (only slightly higher than the Mediterranean countries), with lower employment among the youngest and oldest workers.

Finally, labour and product markets under the Mediterranean model evidence the highest levels of regulation. Further, unemployment protection and spending on active policies and on lifelong learning are the lowest in Europe. These countries have the lowest employment rates, with high incidence of long-term unemployment and greater labour market exclusion for the most disadvantaged groups.

Yet as indicated, the classification still shows some oversimplified factors. Table 3 offers an overview of the various institutions of the countries belonging to each of the four models. The second column reflects the relative position of the various countries, in terms of their total employment rates, as an approximation of the results of their labour markets. The remaining columns show the relative order of the countries according to the values of the indicators that

INSTITUTIONAL CONFIGURATION OF EUROPEAN LABOUR MARKET MODELS (cont'd) CHART 1




SOURCES: OECD, Eurostat and Banco de España .

e. OECD. *Market Regulation* , 2003. A higher level denotes a higher degree of regulation.
f. OECD. *Taxing Wages* , 2004. Difference between gross labour costs borne by employers and disposable income for employees, and equivalent to the sum of personal income tax and compulsory social security contributions paid by employers and employees, net of benefits in cash, as a percentage of gross labour costs. Average of two household situations: an individual with no children who earns the average income and a couple with two children where the household head earns the average income.
g. OECD. *Employment Statistics Database* , 2001. Unionised employees as a proportion of total.
h. OECD. 1995-2000.

approximate each of the institutional aspects.[7] Generally, the characterisations of the Nordic, Anglo-Saxon and Mediterranean models are also applicable to the countries making up each of them, although in each case there are exceptions. It is in the Continental model that heterogeneity is greatest, where the average values of the indicators representing each institutional characteristic mask notable cross-country dispersion.

### *The Danish flexicurity model*

As indicated in the introduction, Denmark's labour market arrangements have been considered, on the basis of the good results obtained, as a potential model for the other European countries. Specifically, the Danish economy is characterised by its having the highest total employment rate of all the EU 15 countries (see Table 4). Although, in comparison with the European average, greater employment in the Danish economy spans all groups of workers by age and sex considered in the table, the differences are more accentuated in

**7.** Thus, for instance, in the row for Denmark, the country with the highest employment rate in the EU 15, the value in the third column shows how this economy has the third most lax employment protection legislation of all the countries considered.

OUTPUTS OF EUROPEAN LABOUR MARKET MODELS (2005) CHART 2


SOURCES: OECD *(Labour Force Indicators)* and Banco de España.

a. Individuals unemployed for over one year as a percentage of total unemployed.

the case of women, the young and the over-55s. That indicates that Denmark has been more successful in integrating into the labour market the groups of individuals who habitually find access thereto more difficult. Denmark also has the second-highest employment rate for women, for the elderly and for the under-24s, exceeded only by Sweden in the first two cases and by the Netherlands in the third. Significantly, the labour markets of these latter countries belong, like Denmark, to the so-called Nordic model. In addition, Denmark's total unemployment rate is the lowest of all countries considered, and its long-term unemployment rate is also one of the lowest.

**EUROPEAN LABOUR MARKET INSTITUTIONS AND OUTPUTS** (a) TABLE 3

| | Labour market outputs | Labour market institutions | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total employment rate | (1) Employment protection | (2) Unemploy-ment benefits | (3) Active labour market policies | (4) Lifelong learning | (5) Product market regulation | (6) Tax wedge on labour | (7) Trade union density | (8) Coordination of collective bargaining |
| NORDIC | 1 | 2 | 4 | 1 | 1 | 2 | 3 | 4 | 1 |
| Denmark | 1 | 3 | 15 | 1 | 3 | 3 | 8 | 12 | 3 |
| Sweden | 2 | 10 | 12 | 3 | 1 | 4 | 12 | 14 | 10 |
| Netherlands | 4 | 7 | 13 | 2 | 5 | 8 | 5 | 3 | 3 |
| Finland | 6 | 6 | 14 | 11 | 4 | 6 | 9 | 13 | 1 |
| ANGLO-SAXON | 2 | 1 | 3 | 2 | 2 | 1 | 1 | 3 | 4 |
| United Kingdom | 3 | 1 | 6 | 9 | 2 | 1 | 2 | ND | 13 |
| Ireland | 8 | 2 | 9 | 5 | 11 | 2 | 1 | 10 | 3 |
| CONTINENTAL | 3 | 3 | 2 | 3 | 3 | 3 | 4 | 2 | 3 |
| Austria | 5 | 4 | 8 | 6 | 6 | 9 | 11 | 9 | 3 |
| Germany | 9 | 9 | 11 | 7 | 10 | 10 | 14 | 5 | 3 |
| Luxembourg | 11 | ND | 10 | 13 | 8 | 5 | 3 | 7 | ND |
| France | 12 | 12 | 4 | 8 | 12 | 13 | 13 | 1 | 12 |
| Belgium | 13 | 8 | 5 | 4 | 9 | 7 | 15 | 11 | 2 |
| MEDITERRANEAN | 4 | 4 | 1 | 4 | 4 | 4 | 2 | 1 | 2 |
| Portugal | 7 | 14 | 7 | 10 | 14 | 11 | 4 | 4 | 3 |
| Spain | 10 | 13 | 3 | 14 | 7 | 12 | 7 | 2 | 10 |
| Greece | 14 | 11 | 2 | 15 | 15 | 14 | 6 | 6 | ND |
| Italy | 15 | 5 | 1 | 12 | 13 | 15 | 10 | 8 | 3 |

SOURCES: OECD, Eurostat and Banco de España

a. For each institution, the ordering of the countries (and models) is on the basis of the sign of the expected effect on the employment rate. Thus, the order is from higher to lower for spending on active labour market policies, on lifelong learning and on the degree of coordination of collective bargaining, as these are assumed to have a positive effect on employment. Conversely, employment protection legislation, unemployment benefits, product market regulation, the tax wedge and trade union density are ordered from lower to higher, since their effect on employment is assumed to be negative.

It is tempting to attribute the successful results in the Danish labour market (and in the other Nordic economies) to the institutional model underlying its industrial relations. This model has been baptised with the term "flexicurity" owing to the mix of flexibility in the use of the labour factor and of security for the working population. It should be clarified, however, that any labour market model combines ingredients of both types. What distinguishes one model from another are the specific forms of flexibility and security that each incorporates and which, generally, are related to the different institutional factors discussed above.

Wilthagen, Tros and van Lieshout (2003) consider the possible forms flexibility and security may take in the labour market. In particular, in the case of flexibility, regard is had to the ease with which: a) workers can be hired and fired (external numerical flexibility), which is related to the degree of laxity of EPL; b) working hours can be adapted to the conjunctural needs of the company (internal numerical flexibility), related to the regulation of the duration of working hours; c) the tasks performed by workers (functional flexibility) can be changed, which depends on the volume and effectiveness of spending on lifelong learning and on active labour market policies, and d) wages can respond to labour market conditions and to individual productivity (labour costs flexibility), which is potentially connected to variables such as trade union density or the degree of coordination of collective bargaining, insofar as these are capable of influencing the level of minimum wages or the existence or not of wage indexation.

THE DANISH LABOUR MARKET RELATIVE TO THE EUROPEAN AVERAGE (2005) TABLE 4

| | Unemployment rates | | Employment rates by sex and by age group | | | | | | Average job tenure (b) |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Long-term (a) | Total (15-64) | Men (15-64) | Women (15-64) | 15-24 | 25-54 | 55-64 | |
| Denmark | 4.9 | 25.9 | 75.5 | 80.1 | 70.8 | 62.0 | 83.9 | 59.8 | 8.8 |
| EU 14 average (c) | 7.5 | 39.1 | 65.9 | 73.4 | 58.5 | 39.3 | 79.0 | 44.6 | 10.8 |

SOURCES: OECD and Banco de España.

a. Percentage of individuals unemployed for more than one year as a percentage of total unemployed.
b. In years, in the same job.
c. Former EU 15, excluding Denmark.

Security can refer to each of the four following dimensions: a) the probability of keeping one's current job (or job security), measured by the degree of stringency of employment protection legislation; b) the probability of remaining employed, albeit not necessarily in the same job (employment security), for which active labour market and lifelong learning policies are relevant; c) the possibility of maintaining a relatively stable level of income (income security), which depends on the design of the benefits received in the event of unemployment, and d) the ease with which work can be reconciled with one's private life, e.g. through maternity or study leave (combination security).

It should be noted that, under these arrangements, there are institutional factors with counteracting effects on labour market flexibility and security. This is the case of EPL since, if it is lax, it provides external numerical flexibility at the expense of weakening job security. Conversely, greater spending on active labour market policies or on lifelong learning should give rise to both higher functional flexibility and employment security. Lastly, it should be stressed that it is not necessarily true that any of the potential combinations of the different types of flexibility and security outlined is desirable for employment.

In the Danish flexicurity model, flexibility is obtained via the existence of scant legal restrictions to dismissal (high external numerical flexibility). Since insurance for individuals who already have a job against the risk of becoming unemployed is low (i.e. job security is low), this protection is provided alternatively through the provision of generous unemployment benefits (income security), although these are subject to strict conditionality requirements. The third constituent part of the model is the central role of active labour market policies. These policies - which include training courses, job-search assistance, programmes for placements in both the private and public sectors, and hiring subsidies – are geared to renewing the skills of unemployed workers, so as to shorten the periods of transition to their new jobs (employment security).

It is likely that the strengthening, during the 90s, of this third leg of the model and the tightening of the conditions governing unemployment benefit eligibility and its subsequent maintenance can help explain the recent success of the Danish labour market. The lower level of EPL and the generosity of unemployment benefits had been present in the Danish model beforehand. However, this did not prevent the unemployment rate rising from the mid-80s to a rate of close to 10% in 1993. The subsequent reduction in unemployment, to around 3.3% at present, has taken place alongside reforms aimed at changing the emphasis from passive labour market policies (focused on maintaining the income of the unemployed) to active policies geared to promoting a return to employment. Specifically, eligibility conditions have become progressively tighter since 1994, requiring workers to have been employed in the last three

years for at least 12 months, instead of six, as was previously the case [Madsen (2002)]. Further, the maximum duration of the benefit receipt period has been cut, having previously been unlimited in the early 90s as long as the unemployed accepted to take part in activation programmes [Andersen and Svarer (2007)]. In practice, this meant at that time that the unemployment benefits system and the activation measures (i.e. the inclusion of workers in a programme of active labour market measures) were, overall, aimed more at rolling over benefit entitlement than at getting the unemployed back to work. At present, the maximum duration of the benefits is four years, activation being obligatory from the end of the first year (or after only 13 weeks in the case of workers under 29 years of age). Finally, although there has been a reduction of approximately 15 pp in the net replacement rate from 1995 to 2003, it remains among the highest on the continent.

As indicated, active labour market policies have gained in importance in this period. The changes therein have been twofold. First, the proportion of the unemployed participating in activation programmes has increased (doubling from 1995 to 2004, up to close to 40%). And second, there has been a greater emphasis on programmes more geared to enhancing unemployed individuals' skills. Among total participants, then, there has been an increase in the weight of training programmes (up to over 50%, compared with one-third in 1995). At the same time, the share of public-sector employment programmes (generally in low-skill jobs), which stood at over 30% in 1995, has been halved. Despite the decline in the number of unemployed, the rise in the proportion of participants in activation programmes and the fact that, under this latter heading, the weight of the more expensive programs has increased, means that the overall cost of active labour market policies has held approximately stable at around 1.8% of GDP.

It is indeed the high cost for public finances that is the corollary of this labour market model, since both unemployment benefits and active policies entail, unlike the protection afforded by EPL, public spending. As a result, the tax burden is heavy.

### *An empirical analysis*

In this section an econometric analysis with panel data is conducted to explore the impact of the various labour market institutions described in the second section on employment rates. The addition here, compared with other previous contributions in the literature, is that the effects of the characteristics of the Danish flexicurity arrangements are investigated. As indicated, the Danish model combines low levels of EPL, high spending on active labour market policies and high replacement rates (albeit with benefits subject to strict conditionality), which makes it worthwhile inquiring into the joint effect of these three institutions on employment. In an attempt to respond to this question, the following flexicurity index has been constructed:

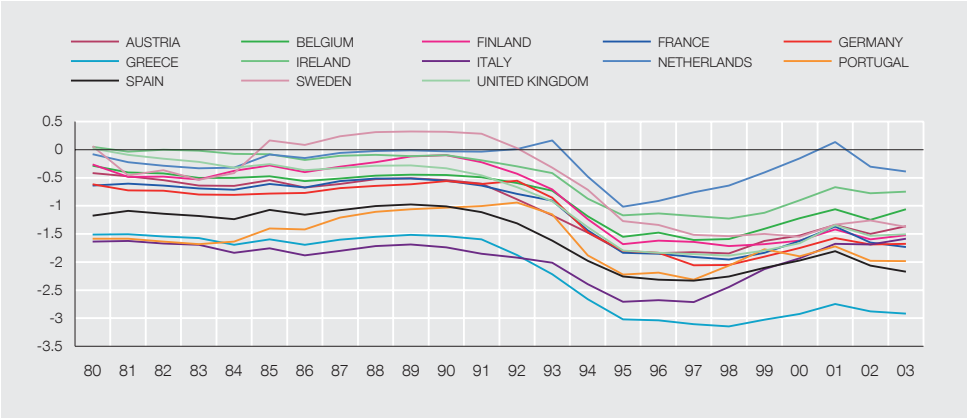
$$F_{p,t} = IF_{p,t} - IF_{DK,t}$$

where the subscript p represents each of the 14 Member States of the EU 15 other than Denmark, DK is Denmark and t is the time subscript. Accordingly, $F_{p,t}$ measures the distance in terms of each country's flexicurity relative to Denmark. $IF_{p,t}$ is constructed as follows:

$$IF_{p,t} = \frac{1}{3} \times \sum_{j=1}^{3} x_{p,t}^{j}$$

where $x_{p,t}^{j}$ refers to the indicators of unemployment benefits (amount and duration), active labour market policies and employment protection legislation of country p, and the decision to give equal weights to each of them is arbitrary.[8] The first two indicators have a positive sign, since Danish

**FLEXICURITY INDEX** (a) CHART 3




SOURCES: OECD and Banco de España.

a. Denmark is the country of reference and its flexicurity index takes the value zero for each year.

flexicurity is characterised by its high levels of both, while the third indicator has a negative sign (since Danish EPL is limited). The time variability of the EPL indicator devised by the OECD is low, which hinders the analysis.[9] Furthermore, the generosity of unemployment benefits should be measured through not only their level, but also their duration and conditionality. In this exercise, generosity is approximated by means of the gross replacement rate, a variable which does not take into account the conditionality of the benefits and which captures duration only indirectly, since the replacement rate is measured over the course of the first five years following access to unemployment status. Accordingly, the duration of benefits has an effect on their level.[10]

Despite its simplicity, the index constructed in this way captures, albeit imperfectly, the distance of the various countries' labour markets relative to the Danish flexicurity model. As can be seen in Chart 3, the reforms to active labour market and unemployment benefit policies in Denmark in 1994 led the value of the index to fall for virtually all the countries, as it represented a distancing from the Danish flexicurity model. In contrast, the latest institutional reforms implemented by most countries have tended to draw their labour markets closer to that of the Nordic economy. At present, according to this index, the country whose labour market is closest to Denmark's is the Netherlands, while those most distant from it are, generally, the Mediterranean countries.

To empirically test the virtues of the Danish model, the following static equation is estimated for a sample encompassing the EU 15 countries (excluding Denmark itself, since the flexicurity index is defined relative to this country) in the period 1980-2003:

$$E_{i,p,t} = \beta_{i0} F_{p,t} + \sum_{j} \beta_{ij} X^{j}_{p,t} + \gamma OG_{p,t} + \delta_{p} + \varepsilon_{i,p,t} \qquad [1]$$

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**8.** Each of the three indicators has been normalised by subtracting its average across countries for any given period of time and dividing it by its standard deviation, i.e.

$$x_{p,t} = \frac{x^{j}_{p,t} - x^{j}_{t}}{\sigma^{j}_{t}}$$

where the capital letters denote the original values of the indicators. **9.** Specifically, there are only data for three points in time: the late 80s, the late 90s and 2003. **10.** The indicator of the conditionality of benefits constructed in Hasselpflug (2005) for the EU 15 countries is only available for 1997 and 2004, which prevent it being used. Moreover, it would have been preferable to use the replacement rate net of taxes and social security contributions. However, the scant availability of data mean gross rates must be resorted to.

where the subscripts i, p and t respectively denote a group of workers (all of them, women, the young or the elderly), a country and a point in time. E, $X^j$ and OG are the rate of employment, the institution j (which is different from the three intervening in the construction of $F_{p,t}$) and the output gap (for the purposes of controlling for the fluctuations in employment over the cycle). Finally, $\delta_p$ are fixed effects by country. In the definition of the different variables, the measurement of the tax wedge reflects only social security contributions and personal income tax, not consumption tax.

The results of the estimation are reported in Table 5. The evidence obtained upholds the virtues of the Danish flexicurity model, since the indicator constructed here has a positive impact on employment in all the population groups considered, with the exception of women, where it is not significant. Most of the remaining effects are of the expected sign. In particular, the tax wedge adversely affects the employment rates of all the population groups, while lifelong learning has a positive bearing (although the effect is not significant in the case of total employment). Greater regulation of product markets diminishes the total and female employment rates, without impacting significantly the remaining groups of workers. The degree of coordination of collective bargaining has a sign contrary to that expected. Finally, the equations for the specific groups of workers include some additional variables. Thus, in the case of the female population, it is found that longer duration for maternity leave leads to higher employment rates. This is not the case, however, for family cash benefits. The restrictions on early retirement promote employment of the over-55s and a higher level of educational attainment among the young means that this group of workers tends to remain outside the labour market for longer, which can probably be explained by the fact that university students belong to this age group.[11]

The interest shown by European policymakers in transplanting the concept of flexicurity into the other EU countries leads to questions about the extent to which the success of the Danish labour market is attributable to this model. This debate implicitly suggests that the reforms to labour markets should be undertaken under an overall approach that were simultaneously to address a reduction in EPL and an increase in spending on active labour market policies, and to maintain high replacement rates (albeit with benefits subject to conditionality). Although the empirical testing of the flexicurity model is not straightforward, the evidence obtained supports the hypothesis that labour market reforms along the lines of the three flexicurity ingredients would raise employment rates.

Yet it is not possible to rule out completely that the Danish results may be due, at least in part, to factors unrelated to Denmark's current labour market arrangements. For one thing, the reforms in the recent stage have coincided with the implementation of stability-geared macroeconomic policies and, in particular, with a sharp fiscal adjustment based on the containment of spending. For another, it has been noted that there is some tendency to overstate the merits of models that work well for a certain period of time [EEAG (2007)]. Thus, for example, the Japanese model of lifelong employment and the German arrangements based on vocational training and worker participation in management decisions, which were lauded in the 80s, fell out of favour a decade later when both countries underwent a prolonged period of economic stagnation.

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**11.** Numerous papers in the literature have estimated similar equations to that set out here, in which the three institutions intervening in the construction of $F_{p,t}$ enter separately. Most frequently in these cases, the dependent variable is the unemployment rate. One study that referred to the (aggregate) employment rates is that by Nicoletti and Scarpetta (2005). For the sample used in this article, the estimation of [1] with free parameters for EPL, unemployment benefits and active labour market policies provides results in line with those expected: the latter of these variables positively affects the employment rates of all the population groups, while the first two variables affect them adversely, although spending on active labour market policies is only significant in the cases of total and female employment.

**EMPLOYMENT EQUATIONS: FLEXICURITY. 1980-2003** (a) TABLE 5

| | Dependent variable: total rate of employment and employment by grou | | | | |
|---|---|---|---|---|---|
| Variable | Total | Men | Women | Young (15-24) | Elderly (55-64) |
| Flexicurity index | 1.32 ** | 1.48 ** | 0.78 | 4.20 ** | 0.76 * |
| Tax wedge | -0.27 ** | -0.37 ** | -0.31 ** | -0.42 ** | -0.45 |
| Trade union density | -0.06 ** | 0.09 ** | -0.17 ** | 0.12 ** | -0.02 |
| Coordination of collective bargaining | -0.10 | -0.53 ** | 0.37 | -1.34 ** | -0.78 ** |
| Lifelong learning | 0.44 ** | 0.35 ** | 0,56 ** | 0.64 ** | 0.51 ** |
| Product market regulation | -1.25 ** | 0.31 | -1.98 ** | 0.61 | -0.01 |
| *Output gap* | *0.41* ** | *0.47* ** | *0.31* | *0.64* ** | *0.11* * |
| Familly cash benefits | | | -2.23 ** | | |
| Female education | | | 0.30 | | |
| Maternity leave duration | | | 0.03 ** | | |
| Relative youth education | | | | -2.99 * | |
| Standard age of eligibility to pension benefits | | | | | 0.29 ** |
| Between-groups $R^2$ | 0.50 | 0.51 | 0.64 | 0.50 | 0.36 |
| Intra-groups $R^2$ | 0.43 | 0.32 | 0.01 | 0.49 | 0.47 |
| Total $R^2$ | 0.44 | 0.37 | 0.18 | 0.52 | 0.47 |

SOURCES: Banco de España.

a. **/* indicates that the variable is significant at 5%/10%. The significant variables have been shaded.

## *Conclusions*

There is broad consensus on the need to reform European labour markets and welfare benefits systems, so that they may provide the appropriate incentives to stimulate an increase in the use of the labour factor. However, a frequent interpretation is that the relatively low rates of employment observed in many European countries are an almost inevitable corollary of the preference of European societies for job stability and insurance against the risk of unemployment, since the institutions covering these objectives are inclined to discourage job creation. These preferences would be responsible for reforming zeal coming up frequently against opposition from the social agents, which ultimately weakens such zeal.

Against this background, the Danish labour market model has aroused growing interest in economic policy debate, as it seems to act as a counterexample to the alleged difficulties of reconciling employment incentives with the protection that workers demand. Accordingly, the term *flexicurity*, used to designate this model, has been resolutely incorporated into European economic policy discussions. The conclusions of the March 2006 European Summit invited the Commission to explore "the development of a set of common principles on flexicurity". In response, the Commission released a Communication in late June 2007 that will act as the basis for the adoption of such common principles by the European Council before the end of the year, so that they may inspire the forthcoming cycle of the Employment Guidelines, which begins in 2008. Foreseeably, these Guidelines will call on the Member States to report, in their National Reform Programmes, on the flexicurity strategies implemented. In turn, the Commission will review the strategies in its Annual Progress Reports.

However, for the Danish experience to point the way for other countries, a correct interpretation of this experience is required. The model in place until the mid-90s, based on flexible

hiring and firing rules and on generous unemployment benefits, was costly and did not prevent a sustained high unemployment rate. The labour market situation improved substantially when the emphasis shifted from passive incomes policies towards active labour market policies. Although the reform of unemployment benefits entailed a reduction in their level, this remains high. The fundamental change was the shortening of the duration of the benefit receipt period, both directly and through the conditions linked to activation. The aim of active policies is to equip workers with the necessary skills to smooth the transition to different jobs during their working life. The outcome is high labour market turnover. On one hand, since EPL is limited, companies are less reluctant to engage new hires. On the other, although the risk of unemployment is relatively high, the periods of unemployment duration tend to be shorter thanks to the training received through activation programmes (which, moreover, allow workers to be - at least in theory - increasingly productive). This experience points to the need for a balanced application of the different components of the model, so as to maximise its effectiveness.

Finally, while accepting that the three basic features of the Danish flexicurity model are responsible for the healthy state of Denmark's labour market, that does not necessarily mean that its characteristics may or should be exactly replicated by other Member States. Firstly, each country has its own institutional framework, in which the actual materialisation of any of these elements may prove difficult or complicated to implement in practice. In particular, it has been said that the Danish flexicurity model is not even the result of a deliberate policy strategy, but rather of protracted institutional developments over time based on successive commitments entered into by social agents.[12] Secondly, the Danish model involves, as indicated, a high cost for public finances, which in turn translates into a high tax wedge on labour, with the subsequent adverse effects on labour supply. Probably, the model's costs are more bearable in the presence of sectoral shocks, since in that case what it permits is precisely a rapid re-absorption of the resulting unemployment in other sectors. Nonetheless, the presence of economy-wide shocks might result in very substantial increases in spending. In this respect, the model's high cost would mean that it might not be appropriate, at least initially, in countries with a high budget deficit and high unemployment rate, since it would be more difficult to assume the increase in spending in those circumstances.

15.11.2007.

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