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Focus

COMPANY TAXATION AND THE INTERNAL MARKET

ROUNDTABLE DISCUSSION ON THE EUROPEAN COMMISSION'S STUDY ON COMPANY TAXATION

Pro and Contra

FOOD SAFETY THROUGH MORE REGULATION?

Special

Spotlights

Research Reports

WES

Trends

Company Taxation and the Internal Market

European company tax reform: Prospects for the future

Jack M. Mintz*

The European Commission's lengthy study of company taxation – almost 500 pages – proposes fundamental changes to the Europe's corporate tax systems.[1] The intent of the reforms is to harmonize company tax bases so that company taxes do not impose barriers on cross-border investment or impair the consolidation of business at the European level. The proposals, including moving to a pan-European corporate tax, are quite far-reaching and some quite novel. But, as the proposals are currently structured, it appears to an outsider that this debate on company tax reform will likely fail to achieve its objectives. Instead, to achieve significant results, a far more radical approach will be needed to consolidate EU company tax systems that will demand far greater political will than what the report sets out in its proposals.

The proposed models for reform

Briefly, the four proposals made are the following:

1. a pan-European harmonized company tax whose revenues would accrue to the European Union replacing existing systems;
2. a European consolidated company tax operating alongside national systems with some or all of the revenue accruing to the European Union;
3. a mutual recognition approach (Home State Taxation) in which a company could use its home state's tax law to define income for its European operations with the income allocated to jurisdictions according to a formula and taxed according to the rate where the income is earned;
4. a harmonized EU system for determining taxable income (Common Base Taxation) which would operate alongside national rules from which companies can choose the tax system they desire.

The essential problem is that trying to change the way that taxes are collected among 15 countries is often viewed as a zero-sum game since revenues are expected to be kept constant. Moving to a new method of collecting tax bases across countries means that some governments will lose while others gain. Moreover, with revenue neutrality, some companies will be better off while others could pay more tax.

One could try to increase the overall level of taxes to ensure each government will not lose revenue. However, increased revenues would mean a greater tax burden for companies, eliminating much of the political support for such measures. Alternatively, if some companies are likely going to pay more tax if the changes are revenue-neutral, governments could cut corporate taxes to buy greater political support but then governments lose fiscally. Revenue-neutral tax reforms are often difficult to accomplish.

A new EU system of taxation will create losers and winners

The motivation for reform – capital market efficiency

The only way that the Commission's proposals can gain wide acceptance arises if there is a positive sum game involved – governments and businesses must feel that there are sufficient economic gains that would make the whole exercise worthwhile.

It seems that the motivation for reform – removing tax obstacles that would facilitate cross-border investment and consolidation of businesses in

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[1] See the reports of the Commission of the European Communities (2001). See also Weiner (2001).

Europe – could improve capital market efficiency and provide a basis for political acceptance. Many businesses looking to create consolidated European enterprises are more inclined to support company tax reform if tax complexities that hinder market efficiency and business consolidation are lessened.

However, the report itself does not explicitly measure economic gains from harmonization and therefore provides insufficient evidence about the gains from simplification and harmonization of tax bases. The use of marginal effective tax rate[2] analysis to measure the impact of taxation on capital investments found that the statutory corporate tax rates were far more important in explaining differences among countries, than differences in the tax base. However, the analysis is limited since it focussed on some specific differences in tax bases, such as the tax treatment of depreciation and inventories costs. From this analysis, the impression given is that tax systems are pretty similar in terms of the base, not the rate of tax. If this were true, then it should not be a difficult matter for the European countries to agree to a common base. But, it is also true that harmonization of company tax base, rather than tax rate, in Europe may not be necessary.

The EU Commission's report provides insufficient evidence about the gains from tax harmonization

Nonetheless, such effective tax rate calculations – useful in other contexts – miss many important differences that are hard to account for but are very important to the company tax planner. As the report argues, the most tangible results from the harmonization of European company taxes would be to

- reduce compliance costs in dealing with 15 different systems,
- consolidate profits and losses at the EU level,
- simplify international restructuring and
- reduce the need to determine transfer pricing and allocating cost overheads.

Company tax systems among European countries differ widely for several reasons (see the Table for a comparison of some countries to illustrate these differences). Accounting practices, such as the treatment of reserves found in Germany, are quite different than that found in some other countries like the UK. Some countries require some reconciliation of book accounts with tax, while others do not. Further, cross-border acquisitions and mergers are affected by differences in the treatment of capital gains and change of control rules for the transfer of losses, valuation of assets upon merger, etc. Timing issues can also impact significantly on tax burdens – such as the carryforward and carryback provisions or tax losses or when reporting requirements differ (annually, monthly or quarterly).

Such differences among countries in tax systems can impair capital market efficiency, and if modelled, would suggest possibly significant differences in effective tax rates on capital. Businesses planning capital investments will seek the greatest returns, net of taxes paid by companies and their shareholders. Cross-border acquisitions could be discouraged if a higher tax, such as the withholding tax or dividend taxes on foreign investors, impose higher burdens on cross-border transactions.[3] On the other hand, certain international tax planning opportunities could, in fact, encourage too many cross-border transactions, especially when investments are channelled through third country entities. For example, cross-border transactions are preferentially treated when companies can take advantage of the infamous "double dip" deduction for interest or insurance expenses. The tax planning arises when a parent can invest in a subsidiary by issuing first debt to the subsidiary from a low-tax intermediary in a third country. The assets of the low-tax entity are funded with equity and the income from the low-tax entity is remitted tax-free to the parent. In turn the parent deducts interest on borrowed funds used to finance equity in the low-tax intermediary (see Fuest, Huber and Mintz (2002)).

The economic gain from increased capital market efficiency and reduced compliance costs arising from company tax reform for Europe is not easy to measure but some estimate would have been valuable. Thus, each of the proposals in terms of their contribution to improving economic efficiency and reduce compliance costs have not been well documented.[4] It is quite unclear as to whether the various proposals themselves would ultimately achieve the objectives stated above. Each proposal is discussed below.

[2] See Part II of Commission of the European Communities (2001).

[3] The EU has eliminated withholding taxes on income paid to residents of other member states. However, the current provisions for providing relief from dividend taxes (such as a lower dividend tax rate or tax credit) often apply to only residents of a country, not EU residents elsewhere. Further, some countries provide dividend tax relief for dividends distributed from income earned domestically, not those derived from other EU sources.

[4] Mintz and Weiner (2001) discuss some of the efficiency gains or losses by comparing Home State Taxation with Common Base Taxation.

Examples of Different Tax Provisions Across Selected EU Countries

Provision	Belgium	France	Germany	Italy	UK
Corporate Tax Rate	39% (top rate) plus 3% surtax	33 1/3 % plus 6% surtax Minimum tax on turnover	25% plus local trade income tax 55% surtax	36% in income (deduction for the cost of new equity finance). Regional tax on "value-added" (origin, income based)	30% (top rate)
Inter-corporate Dividends	95% exempt for qualifying participation	Subject to equalization tax, exempt from corporate tax if sufficient ownership	Exempt	Taxable if from resident company 95% exempt if from EU non-resident company	Exempt
Capital Gains	Capital gains exempt for dividend participation cases	Fully taxed except for shares in subsidiaries (19% rate plus surtaxes)	Taxed although rollover relief given for real estate disposals and exempt for shares held for one year in other companies	Under national tax with substitute tax of 27% or gains spread over 5 years for assets held at least three years	Taxable Relief is provided for inflation
Depreciation	Straightline except for special cases	Straightline except for industrial assets (declining balance)	Straightline or declining balance	Straightline	Straightline for buildings (industrial only) and declining balance for machinery and equipment
Inventory Costs	Lower of cost or market value LIFO[a)] is permitted	Lower of cost or market value LIFO not permitted	Lower of cost or market value LIFO permitted in some circumstances	Lower of cost market value LIFO is permitted	Lower of cost market value LIFO is not permitted
Reserves	Deductible for definite losses in the year	Deductible for losses and expenses, foreign investments and price increases	Reserves under GAAP deductible Some new restrictions apply	Deduction for bad debts, foreign exchange losses, retirement payments	Deduction for provisions as under GAAP but not more than once
Losses	Indefinite carryforward but restricted for change of control	Carryforward for five years except depreciation (indefinite) Three year carryback Change of control restrictions	Indefinite carryforward and one year carryback	Carryforward for five years Restricted upon change of control	Indefinite carryforward against income from similar trading source Group relief for losses
Foreign Source Income	Exempt by treaty or tax reduced by 75% on net income earned abroad	Generally exempt	Taxable with a credit Exemption given for dividends	Taxed with a credit for foreign taxes	Taxed with a credit for foreign taxes
Filing	Quarterly installments for specific dates	Quarterly installments based on fiscal year	Based on calendar year (filing by May 31) Quarterly installment payments	Filed within one month after approval of financial statements with advance payments according to a specified rule	Based on fiscal period Quarterly installments for large companies
Residency	Central management or registered address	Registered address	Corporate seats or place of management	Registered or administrative office, or principal corporate activity	Incorporation or central management or control
Consolidation	No	Yes	Yes	No	No
Special Regimes	Co-ordination, service and distribution centres	Headquarter and logistics centres	N/A	N/A	N/A

[a)] LIFO refers to "last-in-first-out" accounting methods to determine the price of the inventory stock.

European company tax (Option 1)

The creation of a common European corporate tax would accomplish significant harmonization. With a common base used by all 15 countries, tax bases would be substantially harmonized. Companies would be taxed on their European profits, therefore facilitating the consolidation of European operations. Tax administrators would face less difficulty in dealing with transfer pricing, overhead cost allocations and other features of cross-border transactions.

Tax harmonization means tax centralization

The first option, a mandated harmonized European tax, would achieve the greatest efficiencies. However, significant issues arise in that effectively the tax is centralized. If revenues accrue to the EU Commission, the state governments would need to find alternative resources or receive a transfer to make up the difference. The transfer to be calculated would presumably be related to the amount of corporate income earned in each member country, which would effectively be a revenue sharing arrangement. Member countries would need to agree to a common base and would effectively lose the flexibility to adapt their company tax systems for their own needs. Moreover, with a centralized company tax, member country personal tax systems would need to be revised since rules determining personal taxes on income accruing to investors reflect existing tax systems.

Optional european consolidated company tax (Option 2)

To ease the degree of change faced by member countries, a second option is proposed that the new tax base would be optional for companies. Thus, both the European corporate tax and existing national tax systems would be available for companies to select. Thus, companies operating in the same country could operate under quite different company tax regimes. Several substantial distortions could therefore arise.

The option to select the EU tax or the national tax would lead to serious distortions

The first would be the possibility that businesses in competition with each other domestically could face quite different tax bills if one business is taxed under the European company tax and another under the national tax.

The second is significant erosion of the tax base. For example, companies, not part of a corporate group, would be able to engage in tax arbitrage to reduce taxes paid on their inter-company transactions with others. For example, if the European company tax is levied at a higher rate than the domestic Greek tax, financial transactions with debt borrowed by the European company from the Greek entity would result in a sharp reduction in tax paid.

A third problem is that differential taxes will distort the types of real and financial transactions and the organization of businesses in partnerships or stock companies. Even differential treatment of such capital cost deductions can sharply impact on business decisions. For example, a company operating under the European company tax with, say, little depreciation given for machinery costs, could lease assets from companies operating under domestic regimes with, say, far more generous tax writeoffs for depreciation.

Even if the distortions possible under an optional European company tax were minimal, further difficulties arise. One important issue is with respect to the use of revenues generated by the tax as in the case of the first option. If the revenues are paid to the European treasury, member countries will find that they are short of funds. One would have to consider offsetting intergovernmental transfers. Instead, governments, according to some formula, could share the revenues, but, under revenue-neutrality, some governments will gain and others lose fiscally.

Home State Taxation (Option 3)

The option of Home State Taxation, consistent with mutual recognition, would provide a far different and perhaps more practical approach to company tax reform. A company's European income would be taxed according to the rules of the resident country but with the base allocated according to a formula with the tax paid determined by the rate of tax where the income is allocated. The countries would need to agree to a set of factors, such as distribution of payroll, assets, sales and/or value-added[5], to determine how income

[5] The proposed use of value-added is an intriguing idea. On one hand, the European rules are fairly well harmonized so that it would be easy to implement the use of value-added to determine the factors for allocating revenue. On the other hand, value added, as taxed in Europe, is primarily income accruing to labour (and fixed factors of production). To use value-added to measure the factors, the allocation method would be particularly poor in measuring income earned by capital-intensive industries in each country.

should be allocated to each country. Rules would be needed to determine what companies belong to a corporate group.

Home State Taxation itself raises a number of difficult issues for implementation.[6] As in the case of the European company tax proposal, companies operating near each other in a particular jurisdiction could be taxed under quite different systems. For example, a UK company operating in Sweden would still use UK rules to determine the tax base while a Swedish company in Sweden would use Swedish rules. Thus, many of the difficulties mentioned with business competitiveness, tax base erosion and economic distortions would prevail under Home State Taxation.

A further distortion with Home State Taxation is that companies might change residency to reduce their tax liabilities by choosing a country with a more favourable tax base. However, not all companies will be in the same position to do "country shop". Some companies, by changing location, might find it more difficult to raise capital from their home jurisdictions (given regulatory and other barriers to cross-border transactions). A company might also have considerable "goodwill" associated with operating in a particular country, making migration more difficult. Finally, some countries impose capital gains taxes on the disposition of shares when a company migrates so that companies might find it more difficult to change residency if it triggers substantial capital gains taxes for its existing shareholders.

Another problem with Home State Taxation is with regard to the administration of the tax system. Each country's revenue department would be auditing companies that might operate under 15 different regimes, depending on their residency. Countries could come to an agreement to let the home tax authority have the responsibility of auditing tax payments of the European operations of the home-based country. However, letting foreign auditors handle tax compliance for another country raises a number of serious problems with respect to incentives to collect tax on behalf of other countries, consistency with jurisprudence and various procedural issues related to appeals and other matters.

[6] For a general discussion on the problems faced in using allocation methods for corporate income taxation, see Mintz (1999).

Common Base Taxation

The option of Common Base Taxation is similar to that found in the US, Canada, Germany and Switzerland. Companies would use a similar base for their European operations. The income would be allocated according to an allocation formula and the tax rate imposed on income allocated to a jurisdiction would be the domestic tax rate. Each country would therefore receive its tax revenues according to the allocation of the tax base and its own tax rate. In principle, countries could use tax credits that would provide some divergence from the tax base since they would be deducted from tax determined by the allocation method.

Home State Taxation with formulary apportionment raises other issues for implementation

Although similar to existing systems found elsewhere, the European proposal for Common Base Taxation differs in one important matter. As proposed, companies could choose whether they wish to adhere to the Common Base or continue to follow the rule of their country of residence or operation. Many of the difficulties, already raised above with the optional European consolidated company tax apply here. However, some further concerns should be considered.

Common Base Taxation not only requires governments to agree to a common set of rules, they must also agree to rules to allocate income to various jurisdictions. If governments are given a choice of the factors, as in the United States, substantial difficulties arise in that companies could, ultimately, have more or less than 100% of their income allocated across jurisdictions since country-factors could add up to more or less than one depending on the factors used.

Common Base Taxation requires agreement on allocation rules

A further problem is with respect to the tax treatment of international income. Common Base Taxation would be used for determining the allocation of European income to each country. However, income earned from sources outside of Europe could be subject to domestic tax or a European tax. If the latter applies, countries would need to agree to a common treatment of international income. Given that some countries, like Italy and the UK, tax foreign-source income (with a credit for foreign taxes) while others provide significant exemptions especially for dividends (Netherlands and France), there is no common approach used in Europe for the taxation of foreign-source income.

A need to rethink the company tax reform in the EU

Outside of the compulsory EU company tax, which would result in a single harmonized tax, the other proposals are fraught with problems. The optional approach, inherent in the three remaining options, would substantially erode efficiency gains from harmonization since companies would have greater opportunities to engage in tax arbitrage domestically, not just with respect to cross-border transactions. A serious question arises as to whether an optional EU company tax, Home State Taxation or Common Base Taxation, is worth the effort. The objectives set out for harmonization will be achieved in a limited way given these three options:

Only the mandated European company tax would result in significant gains

- Compliance costs in dealing with 15 different systems will be somewhat simplified for businesses that choose the consolidated base. However, complexity will be introduced in other ways. Since some companies will remain with national systems, rules will grow to limit opportunities for tax arbitrage. Further, some conglomerate companies will find that they must deal with 16 rather than 15 systems in terms of tax planning.
- It will be easier for businesses to consolidate profits and losses at the EU level. However, with the existence of national systems, significant trading of losses will transpire through various financial transactions (asset disposals, financial swaps etc.) that might result in restrictive rules imposed by countries to limit such trading.
- International restructuring will be simplified to a certain extent but it will require clear rules to be adopted for the tax treatment of foreign-source income earned by consolidated companies.
- Although transfer pricing and allocation of costs will be more easily dealt with for consolidated companies, such problems will continue to exist for foreign companies and national companies.

Alternatively one could seek common rules for certain aspects of domestic tax systems, a piecemeal approach

Given that the allocation method itself introduces certain complexities and the optional approach could result in substantial inefficiencies and unfairness, it seems that the latter three options would result in minimal economic gains, if any at all. This leaves the first option, the mandated European company tax, as the remaining option with potential significant gains. However, shifting a taxing power from national governments to the European Union raises other issues that are quite difficult to deal with, as discussed above.

Conclusion: Some alternatives

My overall conclusion is that the proposed reforms in the EU for company tax would unlikely achieve desired results. However, two approaches, neither explicitly dealt with in the Commission approach, could be considered.

The first would be to have a mandated consolidated tax with an allocation approach to divide the tax base amongst the EU members, similar to that used in North America, Switzerland and Germany. This would require a common base and allocation system for the system to work best. But, each national government would have sufficient flexibility in that it would levy a tax rate and a regime of tax credits that would allow it to receive revenues and to conduct industrial policy as it wishes. However, to achieve a pan-European consensus on a common tax base and factors is not a simple matter since, unlike Canada and US, there is no federal company tax to model company tax bases at the national level. Thus, it would take considerable political will on part of EU countries to agree to a common tax base.

The second would be to seek limited harmonization by implementing common rules for certain aspects of domestic tax systems to deal with the more egregious areas of inefficiency. As an example, the EU countries have successfully agreed to eliminate withholding taxes amongst themselves to encourage cross-border transactions. In a similar vein, countries could provide for the deferral of capital gains taxes on cross-border mergers. Dividend tax relief could be provided for both resident and EU investors. A system for the consolidation of profits and losses could be considered, similar to the UK loss transfer system, although without a common base it would be difficult to devise a proper one. These reforms are piecemeal in approach so that they do not achieve all the objectives being sought.

If EU countries wish to maximize efficiency gains, then it seems that a move to a non-optional common tax base would best achieve results. Otherwise, the approaches being considered will

not provide sufficient economic gains to make the effort worthwhile.

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Formulary apportionment and the future of company taxation in the European Union

Joann Martens Weiner*

In October 2001, the European Commission set forth a strategy for future company tax policy in the European Union that endorses "the fundamental concept of a common company taxation system in the form of a consolidated corporate tax base for the Internal Market." The Commission makes the case that in the long run companies should be able to achieve a consolidated corporate tax base with cross-border loss relief under a single set of tax rules for their EU activities.[1] Each of the four methods presented generally provides for consolidated taxation with formulary apportionment.

Formulary apportionment is a central element in the new debate over tax reform

The Commission will present its strategy at its "European conference on company taxation" being held in Brussels on 29-30 April.[2] Along with a discussion of the approaches, the conference will address the question: "Is formulary apportionment a way forward for the EU?" Thus, the possibility that the European Union might adopt formulary apportionment is now a central element in the new debate over future EU company tax policy. This endorsement of a company tax system that uses formulary apportionment is a bold step for the European Union, as according to Albert Raedler, a member of the Ruding Committee, "just a decade ago under Ruding, the word apportionment was still a devil's word."[3]

This paper is composed of two parts. The first part compares the distinguishing features of two of the Commission's proposals. The second part evaluates the formulary apportionment system. It explains the theory behind formulary apportionment and then presents some empirical evidence from North America on how apportionment affects business investment and employment.[4] The paper also identifies some additional issues that should be resolved before the EU adopts a consolidated tax system that requires using formulary apportionment.

The commissions's proposals

Tax obstacles in the European Union

The Study identifies the main tax obstacles to cross-border economic activity as the requirement to allocate profits on an arm's length basis (i.e., to apply transfer prices), the imposition of taxes on cross-border income payments, the lack of cross-border loss offsetting, and the taxes imposed on group restructuring. While some of these tax obstacles can be resolved with specific actions, such as broadening the parent-subsidiary directive, the Study argues that the existence of 15 separate tax systems, each of which requires companies to calculate their income for each country in which they operate, is the chief cause of these tax obstacles.

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[1] See Commission of the European Communities "Towards an Internal Market without tax obstacles. A strategy for providing companies with a consolidated corporate tax base for their EU-wide activities," COM(2001) 582 final and Commission staff working paper "Company Taxation in the Internal Market" SEC (2001) 1681, Brussels, 23 October 2001. This paper will collectively refer to these two documents as the Study. For a summary of these documents, see Weiner, "EU Commission Study on Company Taxation and the Internal Market Considers Comprehensive Company Tax Reform," Tax Notes' Int'l, 29 October 2001, pp. 423–425 and 511–518.

[2] For details, see the conference website created by the Taxation and Customs Directorate (TAXUD).
See http://europa.eu.int/comm/taxation_customs/taxation/company_tax/conference.htm.

[3] See "eForum: Company Taxation in the European Union," Tax Notes Int'l, 14 January 2002, pp. 153–174. The Ruding Committee did not evaluate formulary apportionment as a possible company tax system, but it did reject the use of a predetermined formula to apportion income as a common system for the European Community in the foreseeable future.

[4] For an analysis of issues concerning the European Union, see McLure and Weiner (2000).

The Commission recognizes that once tax bases are consolidated across the European Union, it is necessary to allocate that income back to the member states for taxation at the local rate. Indeed, the Commission notes that any comprehensive approach must justify two steps: First, the decision to create a common EU tax base, and, second, to allocate that tax base to the Member States. The Commission believes that if agreement were reached to adopt a comprehensive approach, then the Member States would simultaneously reach agreement on the apportionment formula, factors, and definitions.[5]

What is formulary apportionment?

In contrast to a tax system based on separate accounting and arm's length pricing, under formulary apportionment, companies do not attempt to calculate the income of the affiliated entities of the corporate group. Instead, the corporate group first combines (or, consolidates) the income of each of its operatives into a single measure of taxable income. The group then uses a formula to apportion the income to the various locations where the group conducts its business.[6] This formula is generally the sharebased on of business activity in a location to the total business activity in all locations.

As used in North America, the formulary apportionment method incorporates the notion that the factors employed by a multi-jurisdictional business generate its income. Thus, the apportionment formula includes a combination of the shares of gross receipts, and sales in each location to their totals across all locations.

It is not necessary for the formula to apportion the tax base according to firm-specific factors; it could be based on industry or other broad economic data. With these latter formulae, however, the method will no longer attribute income to the location where it was earned, and the result will deviate from the general notion underlying formulary apportionment that it attempts to assign income to the locations where it was earned.

The Commission's four proposed methods

The Study presented four comprehensive methods that may achieve its long-term goal: Home State Taxation (HST), Common Consolidated Base Taxation (CCBT); a European Union Corporate Income Tax (EUCIT); and a compulsory harmonized tax base. Each system has its own benefits and drawbacks – some options may be more politically feasible than others, while others may be more economically or administratively practical than others. However, each of the methods generally provides a way for EU companies to calculate

Under formulary apportionment, the corporate group consolidates its income and allocates it to the various locations according to a formula

Box 1

Summary of Options for Obtaining Consolidated Base Taxation in the European Union

1. *Home State Taxation*
Under Home State Taxation, EU companies would have the option of computing their income for their operations located in various Member States participating in the home state tax system according to the company income tax rules of the member state where their headquarters are located (the "home" state). Under the notion of "mutual recognition" a member state hosting investment from another member state participating in the system would agree to accept the tax rules of the home state for determining the tax base in the host member state. A different set of tax rules would apply in the EU depending on the tax base in each home state. Home state tax authorities would administer their particular home state tax system. Profits would be allocated to member states participating in the system using a common formula, where they would be taxed at local rates. Profits would be determined under current national systems for non-participating Member States.

2. *Common Consolidated Base Taxation*
Under Common Consolidated Base Taxation, EU companies would have the option of calculating their income for their operations located in various Member States according to a new common EU tax base. This EU tax base would operate in parallel with existing national rules. The same set of tax rules would apply throughout the EU. The member state where the company was headquartered would administer the common EU tax base. Profits would be allocated to all member states using a common formula, where they would be taxed at local rates.

3. *European Union Company Income Tax*
Under a European Union Company Income Tax, a new EU tax base would be developed and would operate in parallel with existing national rules. It would be optional for companies. In one form, this system could create a "federal" EU tax and a single tax authority could administer the tax, with revenues funding EU institutions and activities, or, the member states could administer the EU company income tax.

4. *A Compulsory 'Harmonized Tax Base'*
Under this approach, a single EU tax base and tax code would replace national company tax systems. This EU tax system would apply to all enterprises in all Member States and the national company tax systems would disappear. Member states could administer the tax so there would be no need to create an EU-level tax authority.

[5] See Chapter 17 "Revenue Allocation: The Different Methods" in the Commission Working Paper for details.
[6] This description is extremely simplified and actual practices vary substantially from what is described here. In addition, although the terms 'combination' and 'consolidation' are often used interchangeably, they are not identical concepts. They are sufficiently similar for purposes of this paper to be treated as such. For an exhaustive discussion of the detailed variations in the formulary apportionment system as used in the states and provinces, see Weiner (1994, 1999).

their EU group income on an EU-wide basis. Except for certain variations of EUCIT, each method also uses a formula to allocate the tax base to the member states. Box 1 summarizes the four methods.

Analysis of common consolidated base taxation and home state taxation

The Commission Study considers the first two options, home state taxation (HST) and common consolidated base taxation (CCBT), as the most promising of the four methods presented. Both methods create a common tax base, either for the entire EU (CCBT) or for a subset of member states (HST). Both methods are optional.

Both methods allocate group profits to each jurisdiction using a common formula with the local tax paid according to the local tax rate. Thus, both CCBT and HST face the same difficulties that arise when using a formula to apportion income; these issues are discussed later.

Both, home state taxation and consolidated base taxation create a common tax base but under different rules

However, there is a key difference between HST and CCBT that should be recognized. Under CCBT, a multinational company combines its total profits using a commonly measured EU tax base in all of the member states where it does business. Therefore, regardless of where the parent company is resident, the same tax rules apply for all operations in all EU member states.[7]

By contrast, under HST, the tax rules that apply for any consolidated group in any given member state depend on the residence of the parent company. This key difference between CCBT and HST arises from a basic feature of HST: Under HST, a multinational firm applies its home state tax base to combine the operations of its activities located in member states that participate in the HST system.

Member States are not required to participate in HST, and, in fact, some member states may not be eligible to participate. The Commission Study notes that it is generally accepted that home state taxation would initially be confined to a group of Member States. As no two tax bases in the EU are identical, 15 separate tax bases would continue to exist in the EU. Since the effective taxation of operations located in any given member state depends on the home state of its parent company, effective tax rates will continue to vary across and within the EU member states under HST.[8]

Illustration of home state taxation

The potential ability to apply one tax base to the entire group's operations is an attractive feature of HST. This section illustrates some features of HST, including the concept of mutual recognition and the potential impact if not all Member States adopt HST.

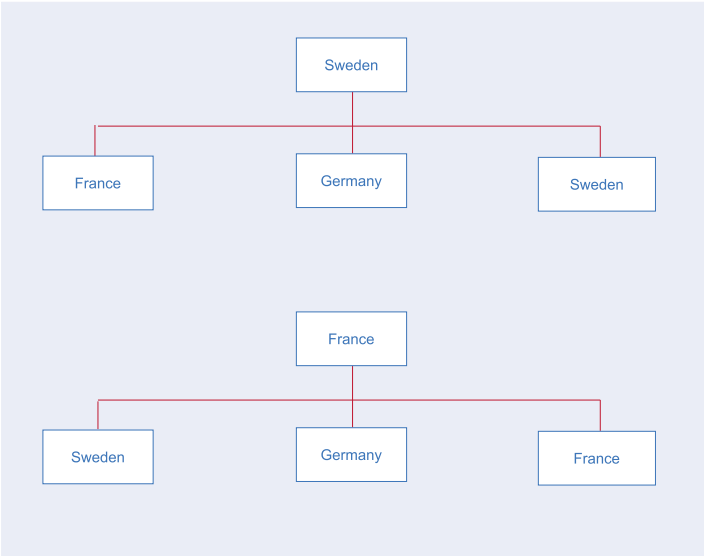
The top panel of Diagram 1 illustrates the basic situation. Under home state taxation, a company with its headquarters in Sweden, for example, could consolidate its operations (both branches and subsidiaries) in France, Germany and Sweden using

[7] This point does not apply for companies that do not use the method.

[8] Further analysis could help determine by how much these rates would vary. Simulations conducted for the Commission study showed that HST would increase the variation in effective tax rates by more than 30 percent and move further away from both capital import and capital export neutrality. The Study noted, however, that many features of HST could not be modeled in these calculations. By contrast, simulations of CBT showed almost no effect on the variation in effective tax rates (see tables 29 and 30 in Part II. chapter 7 "The impact of hypothetical policy scenarios in the EU").

Diagram 1

HOME STATE TAXATION: MUTUAL RECOGNITION



one set of tax rules, those of Sweden. Likewise, as shown in the bottom panel of Diagram 1, a French parent company could consolidate its operations in Sweden, Germany, and France using France's tax rules.

The concept of 'mutual recognition' is fundamental to home state taxation. Under this notion, France, for example, will accept the Swedish rules for determining the tax base of operations with a Swedish parent located in France while Sweden will recognize French rules for calculating the tax base of operations with a French parent located in Sweden. For mutual recognition to function properly, the home state tax systems must be similar.

One implication that arises under HST, when compared with CCBT, is that the taxation of any given company located in a member state hinges on the tax rules in the *residence* of the parent company.[9] For example, Diagram 1 shows that the tax base of the German business with a Swedish parent and the tax base of the German business with a French parent are not identical, simply because their parent companies are located in different countries.

The tax rules will also change if a business is sold to another home state group. For example, if the Swedish parent sells its German business to the French parent, the tax rules that apply for that German business would switch from the Swedish rules to the French rules. In addition, a transaction between the two German businesses with different parents becomes a cross-border transaction.

To avoid drastic changes in the tax burden due to these decisions, and to avoid creating a tax obstacle to cross-border activity, it is essential under HST that the tax bases in participating member states be similar enough so that these changes have no significant impact on business decisions. In such a situation, for example, France will accept Sweden's tax rules and vice versa.

Determining how similar EU tax bases are is, therefore, an initial issue to consider in evaluating HST. The Commission Study presented a number of structural elements of member state tax systems that address this issue. While certain groups of member states have similar approaches to certain elements, the Study found no group of member states that consistently formed a group nor any group or individual member state that was always outside the group.[10] Thus, under current rules, no clear home state group emerges.

While there may not be any obvious initial HST group, it is possible to consider which member states might not be eligible to participate. The HST system imposes two restrictions on the ability to obtain consolidated taxation of EU-wide activities: First, tax bases must be similar in member states where operations are located; and, second, the par-

It is essential under HST that the tax bases of the member states are similar

[9] The same situation arises now, where the effective tax burden of subsidiaries depends on the location of the parent company. See the Commission study, chapter 7. However, it should be noted that the sources of these variations under the current situation are not the same as with HST.

[10] All descriptions of member states tax systems are drawn from the Commission Study. All but three EU member states, Belgium, Greece, and Italy, allow some form of consolidation under domestic law. Among the other 12 member states, the threshold ownership requirements for consolidation range from 51 percent in Germany to 100 percent in Denmark. Thus, some operations might be excluded if they do not meet the ownership requirements.

EU Member State Statutory Corporate Tax Rate, Effective Average Tax Rate And Effective Marginal Tax Rate, 2001

	Corporate tax rate	Effective average tax rate (EATR)	Effective marginal tax rate (EMTR)
Austria	34	27.9	12.6
Belgium	40.17	34.5	22.4
Denmark	30.0	27.3	21.6
Finland	39.0	26.6	21.3
France	36.43	34.7	31.8
Germany	39.35	34.9	26.1
Greece	37.5	28.0	16.9
Ireland	10	10.5	11.7
Italy	40.25	27.6	– 15.9
Luxembourg	37.45	32.2	20.7
Netherlands	35.0	31.0	22.7
Portugal	35.2	37.0	21.0
Spain	35.0	31.0	22.8
Sweden	28	22.9	14.3
UK	30.0	28.3	24.8

Source: European Commission Staff Working Paper (2001b) "Company taxation in the Internal Market," SEC(2001) 1681, 23 October 2001.
Italy operates a dual income tax system that splits the profits tax base into two components that are taxed at different rates. Broadly, the ordinary return is taxed at 19% while the residual profits is taxed at 37%. Marginal investments, which by definition do not earn residual profit, would be taxed at the lower rate. When the EMTR is calculated (average of debt, equity and retained earnings finance) it becomes negative since the negative EMTR for debt financing outweighs positive EMTRs for other two sources of finance. See Table 7 of Quantitative Analysis.

ent company must be able to apply the home state rules for its foreign operations.

Consider the Commission Study, which presents various calculations showing the tax burden across the member states. A glance at these calculations (see Table) shows that with a negative effective marginal tax rate, the tax system in Italy with its "dual income" appears to be substantially different from the tax bases in other member states. Thus, its tax base might not be sufficiently similar to be recognized by the HST participants.

Diagram 2 illustrates the impact of excluding a member state from the HST group. As shown in the top panel, suppose that in addition to its operations in Sweden, Germany and France, the French headquarters company has operations in Italy. If Italy does not participate in the HST system, these operations will not be included in the HST group, and the French parent company will need to use the Italian tax system (and arm's length pricing) to determine the income of its Italian operations. [This possibility is illustrated by crossing out Italy from the group and placing a "?" in the box to reflect the uncertainty over this result.] More generally, under HST, a company may have to comply with many different sets of tax rules within the EU, rather than just a single set of tax rules.

Only member countries with similar tax bases and group taxation would be allowed to participate in a HST group

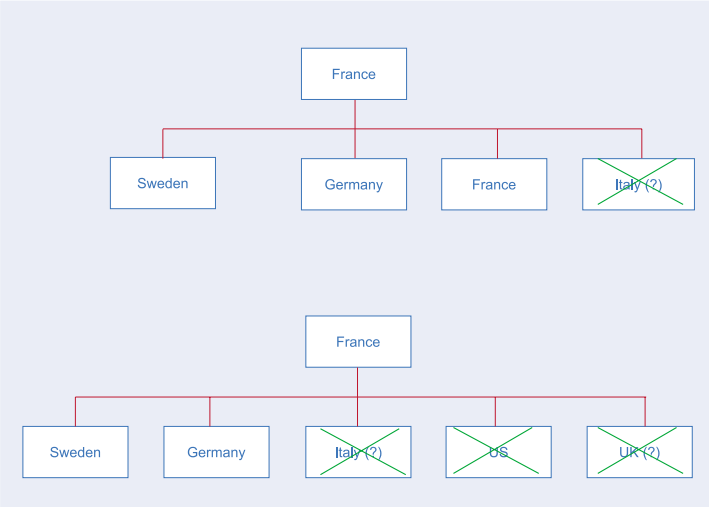
The second point above is also critical. Companies with their headquarters in a participating member state would adopt that member state's domestic tax system and apply it to their activities located in other participating member states. However, not all member states offer group taxation. Thus, countries that do not offer group taxation may not be allowed to participate in HST. This restriction would eliminate Belgium, Greece, and Italy from HST.

The bottom panel of Diagram 2 illustrates a further complication under HST. Consider a French parent with subsidiaries in Sweden, Germany, Italy, the UK, and the US. First, the Italian operations are already excluded as explained above. Second, as the HST system only applies within the EU, all non-EU operations are automatically excluded (the system will apply on an EU water's edge, or EUWE, basis.) The US operations fall under US rules and must be calculated under separate accounting.

The exclusion of non-EU operations has important implications. Many EU companies will need to employ arm's length pricing since many EU multinationals have operations outside of the EU. A glance at EU direct investment data illustrates this situation.[11] Foreign direct investment outflows outside of the EU as a share of EU GDP have risen from 0.5 percent of total GDP in 1992 to more than 3.2 percent of total GDP in 1999.[12] Companies with non-EU operations would continue to use arm's separate accounting along with formulary apportionment. Tax authorities would need to administer both methods. This statement would remain true for EU operations, as well, since some companies may choose to remain under the current system.

Diagram 2

HOME STATE TAXATION: EXCLUDING OPERATIONS



Finally, although it is not possible to know which countries might adopt HST, based on the country's expressed opposition toward giving up sovereignty in direct tax matters, it seems likely that the United Kingdom would not participate in HST. Thus, any HST group with UK operations would, at least initially, have to use the UK tax base and arm's length pricing for trans-

[11] See European Union foreign direct investment yearbook 2000.
[12] It also is a problem for CCBT, as it is limited to the EUWE as well. Extending the system outside of the EU creates a host of new problems regarding the need to attain the agreement of non-EU countries. Thus, for practical purposes, the Commission considers only EU operations.

actions with UK operations. This issue could prove particularly troublesome for an HST group, as UK operations play a large role in EU businesses. The UK is the largest EU destination for cross-border direct investment from EU countries. In recent years, one in four mergers in the EU, for example, involves a UK company.

The bottom panel in Diagram 2 illustrates the result from this analysis. The home state group with the French parent includes only the operations in France, Sweden, and Germany. Operations in the US, the UK, and Italy are excluded from the group, and they continue to use separate accounting and arm's length pricing.

Summary

This discussion of the HST method has identified some issues that complicate the application of HST when compared to CCBT. While some of these issues also arise under CCBT, their importance is magnified under HST, as HST specifically allows a proliferation of tax bases in the EU. Moreover, additional ongoing difficulties e.g., relating to corporate headquarters' location, arise with a partial solution such as HST.

Although HST faces many complications, it should be recognized that implementing a common consolidated EU tax base faces its own problems. The difficulty in defining a common tax base – which is a prerequisite for having CCBT – should not be underestimated. For decades, the EU has tried and failed, to reach agreement on a "harmonized" tax base.

Space limitations prevent describing in detail additional issues. Thus, this section merely lists a few other issues that arise under both HST and CCBT: Both options share difficulties concerning:

- The treatment of intangible income;
- Determining the criteria for consolidation and how to consolidate partially-owned entities;
- Defining the common formula;
- Measuring the factors included in the formula;
- The treatment of foreign-source income;
- Maintaining agreement among member states on the formula; and
- Administering the arm's length system and the formulary apportionment system simultaneously.

The paper now turns to some of the issues that relate to formulary apportionment.

The Commission's perspective – the allocation method is the key issue

As identified above, there are substantial differences among the comprehensive approaches. However, the Study argues that the main issues concerning comprehensive approaches are not related to differences between 'mutual recognition' and 'harmonization,' or the format of any new set of tax rules introduced. Instead, along with the more general question about member state tax rates and tax rate differentials, the *allocation method* forms the key issue.

This key issue – the allocation method – arises since a consequence of creating an EU-wide company tax base is the need to create a way to distribute those profits to the Member States for taxation at the local level, i.e., to find an apportionment formula to apportion profits across the member states. Thus, multinational companies doing business in more than one member state would no longer use the arm's length/separate accounting method for measuring their income earned in each country. Instead, they would consolidate their EU-wide income for all of their operations and apportion this consolidated income to the Member States.

Under HST a company may have to comply with many different tax rules within the EU and without

Formulary apportionment in federal countries

Although there is no experience with formulary apportionment across sovereign countries, a few *federal* countries use formulary apportionment for purposes of taxing within a country. The most well-known systems are in North America. Germany also uses a formula for allocating certain taxes to the Laender.

The success with formulary apportionment in the U.S. states and Canadian provinces is largely due to factors that are particular to these jurisdictions and that do not exist within the European Union. To begin, the states and provinces operate under the umbrella of the federal tax system and may call on the federal tax authorities for assistance in administering the system. Companies doing business in these subnational jurisdictions use the same accounting conventions. Moreover, the tax envi-

ronment in these countries differs dramatically from the European Union. For example, there are no barriers to cross-state expansions or mergers, and there are no withholding taxes levied on cross-border payments. Finally, the U.S. states and Canadian provinces are much more integrated economically than are the individual EU member states.

Box 2

The Apportionment Formula Used in the U.S. States and in the Canadian Provinces

The particular formula for the tax liability in a jurisdiction under an apportioned profits tax as used in the U.S. states and the Canadian provinces are shown below:

United States

$T_i = t_i [\alpha_k(K_i/K) + \alpha_w(L_i/L) + \alpha_s(S_i/S)] \Pi_i$

Where T_i is the company's tax liability in state *i*; t_i is the tax rate in state *i*; Π_i is the company's taxable profits as defined in state *i* (this amount is usually the federal income tax base with adjustments); K_i, L_i, and S_i are the company's property, payroll, and sales in state *i* and K, L, and S are the company's total property, payroll, and sales; and α_k, α_w, and α_s are the weights given to property, payroll, and sales (where $\alpha_k + \alpha_w + \alpha_s = 1$). Under the equally-weighted three factor Massachusetts formula, $\alpha_k = \alpha_w = \alpha_s = 1/3$.

As practiced in the US, states may freely alter the tax rate, the weights on the factors (including setting the weight of any factor equal to zero) and the definition of taxable profits (most states use the federal tax base, but this is not required. At times when the federal government has significantly narrowed the tax base, say through accelerated depreciation, many states have chosen to break the link between their tax base and the federal base to avoid revenue losses). Although the states have adopted similar definitions, states may also modify the factor definitions.

The states may apply the entire formula on either an entity or a unitary group basis. If applied to a unitary group, the factors and income are measured for the unitary group, rather than for just the single business entity.

Canada

The Canadian provinces have much less diversity in their apportionment system relative to the U.S. states. The tax liability in each province under the Canadian method of formulary apportionment is shown below (the variables are defined as above):

$T_i = t_i [1/2 (L_i/L) + 1/2 (S_i/S)] \Pi$

The provinces all use a payroll and sales formula, with each factor weighted equally. The definition of company profits, Π, is derived from the federal income tax base and is essentially invariant across provinces (provinces may offer tax incentives once the tax base has been apportioned.) Tax rates vary across provinces. This harmonization of tax bases and formulas has existed in the provinces for over 50 years.

Three important differences in the Canadian provincial apportionment method stand out when compared with practices in the U.S. states. First, property is not a factor in the Canadian formula. Second, the factor weights are the same in each province ($\alpha_w = \alpha_s = 1/2$). Third, the formula and the tax base are the same (or effectively the same) in all provinces. In addition, as the federal government does not allow consolidation, the provinces also do not allow consolidation of legally-separate entities.

Formulary apportionment

The Commission Study notes that any comprehensive approach must first create a consolidated, or common EU tax base and second, devise a means to allocate that base to the individual member states. This section of the paper turns to this topic and identifies some of the issues that arise when using a formula to apportion company income.[13]

The success of formulary apportionment in the US and Canada derives from their deep integration

Distortions caused by using a formulary apportionment system

One key distortion arises from using a formula that apportions income according to firm specific factors. McLure (1980) examined how the system of apportionment used in the states affects business decisions and found that by using a formula based on firm specific factors to determine state income, the states effectively transformed the formula into a direct tax on whatever factors are included in the formula.[14] This outcome is readily shown by noting how the tax liability is determined in each jurisdiction within the apportionment area, as illustrated in Box 2.

If profits are apportioned according to endogenous factors, such as capital, then formulary apportionment introduces a distortion to the investment decision that is in addition to the usual distortion that arises from taxing the return to capital. This distortion arises because the effective tax rate on capital under apportionment equals not only the direct effect caused by the taxation of the return to capital but also the indirect effect caused by the use of an endogenous factor to allocate profits.[15] This indirect effect can be positive or negative, depending on the relationship between the apportionment-adjusted tax rate in any particular location and the weighted average apportionment-adjusted total tax rate. Thus, apportionment can create an additional 'tax' or 'subsidy' to new investment and employment.

[13] For a detailed discussion, see Weiner (2001a).

[14] Gordon and Wilson (1986) presented a theoretical model that showed the complex ways in which the apportionment formula affects the incentives by firms to undertake new investment, employment, or sales in a state. For example, a formula based entirely on property encourages firms to enter into cross-border mergers.

[15] See Weiner (1994).

For example, with a formula that apportions income according to the location of capital, the apportionment-adjusted marginal effective tax rate (METR) on capital equals the difference between the state's apportionment-weighted statutory tax rate and the apportionment-weighted average tax rate across all states. Thus, if a state wishes to have a relatively low effective tax burden on a factor, such as capital, it can either have a low statutory tax rate or have a low weight on that factor. Applying a zero weight to a factor has the same impact on the apportionment-adjusted METR as setting the statutory tax rate to zero.[16]

In addition to the distortion to the firm's factor choice, the traditional formula creates an ongoing distortion for state tax policymakers. States have an incentive to manipulate the formula to stimulate additional investment or employment. For example, a state can reduce the weight on property (capital) and payroll (labor) and increase the weight on sales to encourage inward investment and employment.

The U.S. states have pursued the above strategy – four times as many states now double-weight (or more) the sales factor than 15 years ago. Empirical evidence shows that reducing the relative weight on property and payroll can stimulate new investment or employment.[17] Moreover, given the relative success of this policy, this instability may result in a formula based entirely on sales within the states. This outcome could raise significant administrative concerns, as it is difficult to identify the location of sales.[18]

However, if a means to bind jurisdictions to the same formula can be found, as has been the case in Canada and is what is envisaged for the European Union, then such instability and difficulties may be avoided. Such a system, also, does not overly restrict sovereignty. For example, even within the nearly uniform Canadian system, the provinces can modify their tax rates and investment tax credits to stimulate additional investment. The common apportionment system in Canada still leaves the provinces significant fiscal sovereignty while not producing the 'chaos' that exists in the U.S. states.[19]

Finally, contrary to what has often been asserted, income shifting is still possible within an apportionment system. For example, Canadian companies operating as related companies in several jurisdictions but that do not allocate income using formula allocation have a much higher elasticity of the corporate income tax base with respect to changes in corporate income tax rates compared with companies that must allocate income across provincial jurisdictions.[20] If the apportionment system does not encompass consolidation, then profit shifting to related entities remains possible. Moreover, even though consolidated taxation limits income shifting, per se, the location of factors can also be manipulated, which effectively shifts income.

Distortions are caused by formulas based on firm-specific factors (US). Canada uses a common apportionment system

Box 3 summarizes some of the empirical evidence concerning the impact of formulary apportionment and unitary taxation on business investment and employment decisions. The empirical evidence shows that states can influence business investment and employment through changes in their formulae and tax rates. The Canadian provinces can also affect investment through changes to tax rates and transparent investment incentives, such as the investment tax credit.

How should the formula be defined?

The early state formulae generally included factors such as accounts receivable, cost of materials, stock of other companies, etc., but the states eventually settled on the simpler property, payroll and sales formula as adequately representing how income was generated.[21] These factors were initially chosen since they reflect how income is generated and recognize the contributions to income made by manufacturing and marketing states.[22] The U.S. Supreme Court has referred to the provision that the factors should reflect how income is generated as meeting the "external consistency" test.[23] When

[16] As the first policy only affects firms that apportion income while the second policy affects all firms, the revenue consequences differ under the two options. Weiner (1994) showed that many states changed their tax rates at the same time that they changed the weight on the capital factor to meet revenue concerns.
[17] See Goolsbee and Maydew (2000), and Gupta and Hoffman (2000) and Weiner (1994).
[18] Much of this debate about how to locate sales is now occurring concerning the taxation of electronic commerce.

[19] See McLure and Weiner (2000) for this quote.
[20] See Mintz and Smart (2001).
[21] This formula applies to firms in manufacturing. Other industries use different formulae.
[22] As the formulary system was adapted from the "unit rule" of taxing the transcontinental railroad according to the value of property located in each state relative to the total property, it also was logical to use such an approach when apportioning total income to the states.
[23] The corresponding "internal consistency" test is that the sum of the weights applied to the factors equals one, i.e., if all jurisdictions adopted that formula there would be no double taxation.

Box 3

What do we Know About the Effects of Formulary Apportionment and Unitary Taxation?

(1) Does the cross-state variation in apportionment formulae and tax rates explain the cross-state variation in industry capital-labor ratios?

A: No. As states have generally maintained equal weights on the property and payroll factors when they have changed the formula, the variations in the formulary apportionment system across the states do not introduce a measurable distortion to a firm's relative capital and labor hiring decisions.

(2) Do states that increase the weight on the sales factor encourage additional capital spending or employment in the state?

A: Yes. Controlling for changes in the tax rate, states can, at least temporarily, gain additional investment or employment from increasing the relative weight on the sales factor.

(3) Did business investment increase in states when they abandoned worldwide unitary combination?

A: No. There was no measurable increase in business investment in states that discontinued using worldwide unitary combination.

(4) Can jurisdictions stimulate new investment through competitive tax rate and investment tax credit changes within a generally uniform apportionment system?

A: Yes. Based on data from the Canadian provinces, holding tax rates in other provinces constant, provinces can attract new investment by cutting their tax rates or introducing investment tax credits. Provinces also can attract new investment by providing tax incentives that are not available in competing provinces.

(5) Can companies shift income within an apportionment system?

A: Yes. If the jurisdictions do not allow consolidation or combination of related but separately-incorporate entities, companies may engage in transfer pricing to shift income to low-tax jurisdictions. Moreover, with sales in the formula, companies may alter the location of sales to shift income to a tax-favored location.

Sources: Joann M. Weiner (1994), "Company taxation for the European Community: How subnational tax variation affects business investment in the United States and Canada," Ph.D. dissertation, Harvard University, 1994. Austan Goolsbee and Edward L. Maydew (2000), "Coveting thy neighbor's manufacturing: the dilemma of state income apportionment," *J. Pub Econ,* Vol. 75, No. 1, January. Bharat N. Anand and Richard Sansing (2000), "The Weighting Game: Formula Apportionment as an Instrument of Public Policy," *Nat'l Tax J.,* Vol. Liii, No 2. Gupta, Sanjay and Mary Ann Hofmann (2001), "The Effect of State Income Tax Apportionment and Tax Incentives on New Capital Expenditures," mimeo, Arizona State Univ. Jack Mintz and Michael Smart (2001), "Income Shifting, Investment, and Tax Competition: Theory and Evidence from Provincial Taxation in Canada," manuscript, U. of Toronto.

The exact definition of the formula may not be as important as reaching agreement on a common formula

the Canadian provinces adopted formulary apportionment, they followed the U.S. approach in using firm-specific factors, but eliminated the property factor and implemented an equally-weighted payroll and sales formula.

It may be argued that the exact definition of the formula is not as important as reaching agreement on a common formula.[24] There has been little controversy about the Canadian apportionment system, even though the provinces use a formula that is similar to the formula used in the U.S. states. Perhaps this stability has occurred because the provinces have used the same formula for five decades while the states have often changed their formula. In many ways, the payroll and sales formula reaches a reasonable compromise among competing interests, since, as Musgrave (1984) noted, it balances the interests of the demand side (through the sales factor) and the supply side (through the payroll factor) while also representing the factors that generate income.

As the European Union is not bound by the constitutional constraints imposed on the U.S. states, the EU may explore other formulae. For example, the Swiss cantons use a formula based on the characteristics of the industry to allocate income across cantons. Mintz (1999) discusses using a formula that allocates income according to industry averages, rather than firm averages. The Commission Study notes that the firm's value added, or member state GDP or VAT base could also be the allocation keys. However, any formula that is not based on firm-specific factors may not bear a reasonable relationship to the factors that generate the income and may be perceived as not being equitable.

Consolidated taxation and unitary taxation (unitary combination)

Determining the contours of the group to be combined is a central issue in adopting any form of consolidated group taxation within the EU.[25] Without consolidation, companies can continue to shift income to related entities located in low-tax jurisdictions. This restriction, however, prevents companies from transferring losses to profitable

[24] This insight is not new, as it was made by the National Tax Association as long ago as 1922 when it noted that "The only right rule … is a rule on which the several states can and will get together as a matter of comity." McLure and Weiner note that reaching agreement on the same formula is also true of the decision to use formulary apportionment in the first place.

[25] All of the proposals allow for consolidation, although not unitary taxation. Nevertheless, many of the arguments that apply in determining the unitary group also apply in determining which entities to consolidate in the common group.

companies within the group and thus reducing tax revenues. The company group can be defined in many ways, ranging from a test based solely on ownership, which is generally followed under consolidation, to tests that look at the connection of the related entities to the parent company as generally followed unitary combination.

Unitary combination is a broader notion than consolidation. Under unitary taxation, or unitary combination as it is also known, members of an affiliated group of companies that form part of an economically integrated group are combined and treated as a single entity for tax purposes. Thus, the unitary tax treats a highly-integrated company as a single operation even though that group may be composed of legally-separate entities.

The EU Study does not explicitly evaluate the unitary method. It does find that "it would seem that for the EU to adopt formulary apportionment and/or unitary combination it would require a substantial conformity of definitions of tax bases, apportionment formulae, measures of apportionment factors, and unitary businesses." As mentioned earlier, in their analysis of formulary apportionment in the European Union, McLure and Weiner (2000) concluded that if tax rates continue to differ widely within the EU so that profit shifting across separate entities remains attractive, then a system of formulary apportionment that requires unitary combination seems to be the only alternative apportionment-based system worth considering. However, if tax rates and the tax bases converge, then the EU might be able to avoid the unitary approach.

The interaction of formulary apportionment with the rest of the world

The interaction of the formulary method with the arm's length system is a major issue that the EU should address if it considers adopting formulary apportionment.[26] By limiting consolidation to the European Union, national income would be subject to two different approaches, depending on whether the transaction took place inside or outside of the EU. Thus, in many cases, both formulary apportionment and arm's length taxation would apply at the international level.

Critical changes would be necessary in other areas. For example, the current international treaty network applies the separate entity and arm's length approaches. Difficult issues might arise if the tax authority in a non-EU state that used the arm's length system adjusted the transfer price of a product transferred from an EU parent to its non-EU business. Under most treaties, the EU country would have to make a correlative adjustment. However, as the EU profits would have been determined under a different method, the profits in that country may have been apportioned to another country. For example, if apportionment allocates more income to a host country than under separate accounting, then the home country may be requested to grant a larger foreign tax credit or to exempt more foreign-source income than if both countries operated the same system. If the home country does not accept this assessment under formulary apportionment, since it uses separate accounting to calculate profits, then companies could be double taxed. The opposite situation could lead to double exemption.

If tax rates continue to differ widely in the EU, a system of formulary apportionment with unitary combination seems to be the only alternarive

Conclusion

By endorsing consolidated base taxation with formulary apportionment within the European Union, the Commission has thrust a once highly-controversial issue – formulary apportionment – to the top of EU company tax policy reform proposals.[27] In so doing, the European Commission has taken a bold first step toward creating a common consolidated tax base with formulary apportionment in the European Union.

Not so long ago, many might have feared that moving to formulary apportionment in the European Union would be a nightmare. As shown by the experiences in several countries that use the method at the subnational level, formulary apportionment creates complex distortions to business investment, employment, and sales decisions.

To avoid creating a situation of tax gaps and overlaps, if the EU adopts formulary apportionment, it

[26] For an evaluation of a broad range of issues that would be involved in adopting formulary apportionment at the international perspective, see the U.S. Treasury conference paper by Weiner (1999). International issues were a key concern at the Treasury conference. For a discussion of the conference, see Tax Notes Int'l, Dec. 26, 1996.

[27] Much of this controversy surrounded the worldwide unitary tax employed in some U.S. states. The issues involved in extending consolidated taxation and formulary apportionment, i.e., worldwide unitary combination, are beyond the scope of this paper. For a review of this controversy, see Weiner (2001a).

must find a way to agree on the definition of the common tax base, the composition of the taxable corporate group, and on the formula used to apportion profits within the defined area. Member States must reconcile divergent tax claims that would arise from the interaction of the formulary system with the separate accounting method used in other countries. Moreover, tax authorities and many companies would have to maintain expertise in both systems; companies would continue to use the current system for transactions outside the EU. Transitional mechanisms would need to be developed.

The points raised in this paper, as well as the entire issue of how to deal with income earned outside of the consolidated group (both within the EU and in other countries), administrative issues, and the integration with the international approach and the income tax treaty network, are just a few of the many issues concerning the use of formulary apportionment in the European Union that remain to be resolved. However, consolidated base taxation with formulary apportionment is an appropriate way to tax companies within an integrated market. In this light, it seems that formulary apportionment has a promising future for company taxation in the European Union.

Consolidated base taxation with formulary apportionment is appropriate for an integrated market like the EU

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Roundtable Discussion on the European Commission's Study on Company Taxation

Conference on "Corporate and Capital Income Taxation in the European Union", Mons, 7–8th December 2001

Summary

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In October 2001, the European Commission issued two documents on company taxation: A study prepared by the Commission Services ("Company Taxation in the Internal Market") and a policy Communication from the Commission ("Towards an Internal Market without tax obstacles – A strategy for providing companies with a consolidated corporate tax base for their EU-wide activities").[1]

The two documents were prepared following a mandate given to the Commission by the Council of the European Union in 1999. Among other things, the mandate asked for the study to illustrate existing differences in effective corporate tax rates; highlight remaining tax obstacles to cross-border economic activities in the Internal Market; highlight the policy issues involved in reducing continuing tax-induced distortions in the Internal Market and examine possible remedial measures. The mandate explicitly stressed that co-operation in the tax policy area was not aiming at uniform tax rates.

In preparing its study, the Commission was assisted by two expert panels. However, in contrast to the Ruding Report of 1992, the final responsibility for the content of the study rests with the Commission Services, rather than with outside experts.

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[1] Both documents can be found on the Commission's web-site under http://europa.eu.int/comm/taxation_customs/taxation/information_notes/tax_saving.htm.

The political context

Before setting out the content of the two Commission documents, and in order to allow a better understanding of the Commission recommendations, it is useful to briefly set out the present political context for taxation policy in the European Union.

To begin with, it needs to be emphasised that the unanimity principle applies to all decisions on tax matters. Against this background, it is not surprising to observe that no new EU legislation on direct taxation has been adopted since 1990. Concerning company taxation more specifically, there was no success in implementing the recommendations of the so-called Ruding Report of 1992, the last major report on company taxation in the EU. The Ruding Report had in fact proposed a far-reaching harmonisation of the corporate tax base, as well as the introduction of compulsory minimum (30%) and maximum (40%) nominal tax rates.

Because decisions on tax matters must be unanimous, no new legislation has been adopted since 1990

Finally, it must be stressed that any Community initiative has to respect Member States' competences in the light of the subsidiarity principle.

The content of the study

In accordance with the mandate, the study prepared by the Commission services covers four main areas of analysis:

1. The calculation and analysis of a wide range of marginal and average effective tax rates for the 15 EU Member States;
2. Identification of the remaining tax obstacles hindering cross-border economic activities in the EU;
3. An analysis of targeted solutions to the different tax obstacles that have been identified;
4. An analysis of so-called comprehensive solutions.

The effects of the existing tax obstacles

The different tax obstacles that have been identified are described in some detail in the study.

However, it might be useful to briefly illustrate the economic effects of these obstacles when seen from a company's perspective. These concern in particular:

- A higher tax burden for trans-national companies compared to otherwise identical national companies (e.g. due to the absence of horizontal cross-border loss compensation)
- Economic double taxation resulting from incompatibilities between national tax systems (e.g. due to inadequacies of the existing Parent/Subsidiary Directive)
- Extra tax burden in case of cross-border economic restructuring (e.g. due to inadequacies of the existing Merger Directive)
- High compliance costs because of the necessity of dealing with up to 15 different tax systems in the EU (e.g. transfer pricing difficulties linked to separate accounting)

Existing tax obstacles place a heavy burden on companies

In principle, the remaining tax obstacles could be removed either by targeted solutions or by comprehensive solutions. This presentation only focuses on the latter type of solutions since these would in principle remove the obstacles altogether in a more unified manner.

Comprehensive solutions

Four options were analysed in the study:

1. Home State Taxation (HST), where all or a group of Member States agree to accept that certain enterprises with operations in more than one Member State could compute their taxable base according to the tax code of their "Home State", instead of according to all the different tax codes of the respective Member States where they have operations.
2. Common Consolidated Base Taxation (CCBT), where some or all Member States would agree on an optional additional tax code applicable to certain types of enterprises operating in more than one Member State.
3. European Corporate Income Tax (EUCIT), where – similar to CCBT – a new single corporate tax would have to be drafted for application across the EU. In the purest form, there would be one single EU-wide tax rate and the revenues would go to the Community budget.
4. Compulsory Harmonisation of the existing fifteen national tax codes in the EU.

All options would offer companies the possibility of using a single tax base for all their EU-wide activities. All, except to a certain extent EUCIT, would require a mechanism for allocating the tax base/tax revenues between Member States. In all cases, except under certain circumstances the EUCIT, Member States would continue to set the tax rates.

None of the four comprehensive approaches appears to offer a perfect solution. Each has its respective advantages and disadvantages, which can be summarised as follows.

Pros and cons of "Home State Taxation"

Pros:

- The approach is based on the Single Market idea of mutual recognition;
- It respects the subsidiarity principle;
- There is no need for unanimous agreement of Community measures, as a sub-group of Member States could start implementing HST;
- There is no need for the time-consuming development of new laws;
- Tax administrations as well as companies can work on the basis of existing tax laws, traditions etc.;
- The details of the proposal are relatively well researched (Stockholm Group);
- It could provide a pragmatic intermediary step in the development of more ambitious approaches.

Cons:

- There is a risk of getting stuck with an unsatisfactory intermediary solution (e.g. like in the case of the transitional VAT system);
- There is a different treatment for companies operating in the same market depending on the location of their parent company (up to 15 home states);
- This could under certain circumstances cause discrimination problems;
- Despite the available research, technical problems remain (for example relating to double-taxation agreements with third countries or the treatment of minority shareholders);
- The responsibility for tax audits and control is unclear;

- There is some reluctance by Member States;
- There is a need to define "home state" and "home state group".

Pros and cons of "Common consolidated Base Taxation"

Pros:
- It is a coherent and systematic approach from an industry perspective;
- There is a common treatment for all participating Member States and companies.

Cons:
- Developing a completely new EU tax base is an extremely complex and time-consuming task;
- Member States would have to administer two tax systems at the same time;
- There could be possible discrimination problems;
- A number of technical problems remain (for example relating to double-taxation agreements with third countries or the treatment of minority shareholders);
- There is a reluctance by Member States, presumably in particular against a common EU tax base that is more attractive than the existing domestic one;
- There are no existing practices, traditions etc.;
- The legal system in case of disputes is unclear (which jurisdiction?).

Pros and cons of a "European Corporate Income Tax"

Pros:
- Similar advantages as CCBT;
- If there were only an EU tax rate, one single effective tax rate would apply across the EU, thus avoiding economic distortions;
- For participating companies the obstacles would be removed.

Cons:
- There are additional political difficulties (link to debate on the EU's own resources system; national sovereignty on tax rates);
- There is the question of who would administer the tax (national tax administrations or a new EU tax administration?);
- There could be possible discrimination problems;
- The new tax system would be time-consuming to develop.

Pros and cons of a "Compulsory Harmonised Tax Base"

Pros:
- Theoretically, this could be 'perfect' for the Single Market;
- It provides one tax base (both for companies and tax administrations);
- There are fewer administrative and compliance costs;
- The regime would be transparent.

Cons:
- Harmonising Member States' existing tax bases is an extremely complex and time-consuming task;
- It would imply other far-reaching harmonisation steps (tax system, EU double-taxation agreement etc.);
- Member States have fundamental objections to a harmonisation approach in the field of company taxation;
- It could be argued that this would be a disproportionate measure in relation to its purpose (of resolving specific tax problems of multinationals).

The pros and cons of the four proposals show the difficulties on the road to tax reform

Commission Conclusions

On the basis of the analysis presented in the Commission Services study, the European Commission has drawn the following policy conclusions. Firstly, a two-track strategy is required, containing both targeted and longer-term comprehensive solutions. Secondly, companies resident in the EU should be provided with (the possibility of) a consolidated corporate tax base for their EU-wide activities. Thirdly, each of the comprehensive solutions has its particular advantages and disadvantages. At this point in time, it is therefore not possible to recommend any particular comprehensive solution. Instead, further analysis and debate is necessary before deciding on the way forward.

HOME STATE TAXATION VS. COMMON BASE TAXATION

SILVIA GIANNINI*

The Commission's Study on "Company Taxation in the Internal Market" and the related Communication entitled "Towards an Internal Market without Tax Obstacles" together represent a significant development in EU policy on corporate taxation. In the "Monti Package", attention was focused on "harmful" tax competition produced by preferential tax regimes, and on removing specific obstacles to cross-border flows (interests and royalties). The new EU Commission's Study and Communication, on the other hand, focus on the general corporate tax regimes of member states and their effects on the Internal Market.

The commission's study and communication

A comprehensive solution has many advantages over the existing system

The first two parts of the Study, by comparing existing tax legislation and the effective tax rates on domestic and cross-border investment, clearly demonstrate the existence of important tax distortions that are very likely to bring about a misallocation of capital and welfare losses within the EU. The second two parts of the Study review the most important obstacles to the Internal Market, and suggest a wide range of remedial measures. The new policy consists of a two-track strategy based on:

a. specific measures designed to address the most urgent problems in the short and medium term;
b. a longer-term "comprehensive" solution according to which companies operating at the EU level will have one single consolidated corporate tax base. This consolidated tax base should be subsequently allocated across different EU jurisdictions by an automatic formula, and taxed at the national tax rates, which member states will continue to establish themselves.

There is no doubt that this "comprehensive" solution is the most important advance made by the new Commission's strategy regarding corporate taxation. Its implementation would entail a major change in the present situation and would produce a series of transitional costs, too, as the Commission's study makes quite clear. However, a consolidated tax base with formula apportionment in many respects appears the most suitable one for a truly internal market, where it is becoming increasingly difficult to correctly ascertain where profit is earned and consequently apportioned according to separate accounting and arm's length principles.

The Study reviews different targeted and comprehensive solutions: its comparative analysis of the various options frequently underlines the need for further analysis before any decision on the best direction to follow can be taken. The proposals reviewed constitute the starting point for a broad debate involving not only the member states, but also the business community, tax experts and academics. This debate should involve a discussion of both targeted and comprehensive solutions: specific short-term measures must not only be consistent with the comprehensive longer term solution, but also constitute the building blocks of its achievement. In doing so, the prospect of a consolidated corporate tax base at the EU level might even help overcome some of the difficulties experienced by those targeted solutions (e.g. the directive on cross-border losses) proposed in the past, in so far as it will provide a coherent framework within which to tailor short- and medium-term measures.

A consolidated corporate tax base with formula apportionment

It is well known that a system like the one envisaged by the Commission has many advantages over the existing one and over specifically targeted

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measures. A system of consolidated profits with formula apportionment could, in fact:

- in one move both tackle and solve some of the most important obstacles within the Internal Market, such as transfer pricing problems, the impossibility of loss compensation, and the possibility of double taxation on dividends, interest and royalties;
- reduce compliance costs for companies and tax administrations resulting from having to deal with 15 different tax rules and laws, which is seen as being one of the most important and urgent problems to be resolved;
- be consistent with the aim of preserving a significant degree of tax autonomy of member states when it comes to setting their tax rates, which is in keeping with the subsidiarity principle;
- reduce the incentive to shift profits within the group to those countries with the lowest tax rates, since the implementation of formula apportionment is suggested together with unitary accounting within the group.

However, economic studies also suggest that a consolidated tax system with formula apportionment does not guarantee global economic neutrality. With regard to the allocation of the factors of production within the EU (where the system of automatic allocation would be restricted), the exact types of distortions will depend on the factors included in the formula, and their magnitude will be a function of the divergence in tax rates between countries. In fact, a tax levied on a base that is apportioned according to a given formula corresponds to a set of taxes levied on the various different factors included within the formula, and the effective tax rate on each factor changes with the use of this factor. The different tax rates levied nationwide will distort the allocation of capital according to the extent that capital is included in this formula. As the experience of other countries clearly shows, this system, albeit far from perfect, can nevertheless constitute a viable solution which manages to satisfactorily trade off differing needs, and in particular efficiency against fiscal autonomy and a relatively greater degree of simplicity.

The proposed system is in fact similar to those already adopted by federal states like the United States or Canada, the subject of numerous studies and writings. An analysis of these countries' experiences underlines not only the advantages, but also the flaws, of such systems, together with the problems of implementing and maintaining the formula method.

However, the EU countries would have to face more problems than a federal state in adopting a system of consolidated taxation with formula apportionment of the tax base. As underlined in the Study, "the two examples mentioned, USA and Canada, have one fundamental distinctive feature in comparison to a possible EU system. In each case they have both a national (federal) tax and a local tax or taxes (USA-State and Canada-Provinces)" (p. 419–420). In the EU there is a lack of any "federal corporate tax base" which at the same time provides a clear benchmark for the establishment of the tax base to be apportioned: on the contrary, there are 15 different sets of accounting and taxation rules and laws defining what constitute taxable profits in each of the member states. Similarly, there is no "federal tax rate" constituting a minimum tax rate, on top of which the states or provinces of the federation can apply their own rates, but once again 15 different tax rates.

Unlike in the US and Canada, there is no "federal corporate tax base" or a "federal tax rate" in the EU

I am now going to concentrate on these "additional problems", problems that are peculiar to the EU situation and ones that are destined to further complicate any transition process towards the new consolidated tax base for EU businesses proposed by the Commission. Thus I will not be going into other very important issues such as the choice of the "right" formula and the effects this might have on the tax revenue of the member countries.

Establishing the tax base

With regard to the problem of how to define the consolidated tax base, the Commission's Study analyses four different options: Home State Taxation (HST), Common Consolidated Base Taxation (CCBT), European Corporate Income Tax (EUCIT), and the "Harmonised" Corporate Tax Base.

Harmonised compulsory approaches, like EUCIT and the "Harmonised" Corporate Tax Base, are generally recognised as being better suited to meeting the objectives of efficiency and simplicity of the tax system. However, the Study focuses its attention on two proposals, HST and CBT, which require a much smaller degree of integration. By introducing flexibility into the tax coordination process, they are con-

sidered more practical and more politically viable than the aforementioned harmonised compulsory approaches. As past experience shows, the latter are heavily constrained by the unanimity decision rule: to make any progress in this field, the Commission is increasingly implementing or proposing the use of flexible coordination tools, as in the case, for example, of the Code of Conduct.

Both HST and CBT share with the Harmonised Tax Base proposal the important feature of leaving member states free to set their tax rates on allocated profits. In addition, HST and CBT introduce further flexibility with regard to the establishment of the tax base, the way in which the system can be agreed upon and implemented by member states, and the choice of countries and companies that may apply the new system. Under HST, branches and subsidiaries of companies operating within the EU would be taxed according to the rules of the parent company's home country, and the system could be agreed upon initially by a subset of member states on the basis of mutual recognition. In the case of CBT, on the other hand, existing national rules would be accompanied by a parallel system established at the EC level, which would be an alternative option to the domestic system for those companies operating at the EU level.

There are important differences between HST and CBT in terms of efficiency, simplicity and political process of implementation

There are a number of pros and cons to these flexible approaches: while they would facilitate the drawing up of agreements among member states, at the same time they usually involve efficiency losses as well as compliance and administrative costs. It might be worth bearing some costs in order to make some progress towards the coordination of corporate taxation. However, these costs have to be carefully assessed against expected benefits.

From this point of view, there are some important differences between the two proposals that are likely to attract the most attention during the future debate on EU corporate tax policy: i.e. HST and CBT. The following examples show some of these differences with regard to the efficiency of the two proposals, their simplicity and the political process of implementation.

Efficiency

As I have already mentioned, a consolidated system with formula apportionment is not globally neutral if there are different tax rates. Furthermore, the different definitions of the tax base under HST and CBT would have other consequences on efficiency that should be taken into account.

1. HST, even more than CBT, is closely intertwined with the formula apportionment system, and as experience in the United States and Canada have shown, with such a system it is better not to allow for divergences from the "federal" tax base and to restrict local autonomy to the granting of tax credits. In the case of HST, the existence of differences in accounting and tax rules leading to different tax bases is likely to result in distortions, complexities and disputes between the member states participating in the system. Moreover, the total tax base to be divided among these countries would depend on the country in which the parent company is located.

2. HST would not be based on a set of clearly defined, consistent common rules within the Community. Such a set of rules might emerge as the spontaneous result of a process of convergence towards the mean, or most favourable, system on the part of those countries who originally signed the agreement. However this would not necessarily be the best solution from the point of view of the economic efficiency of the EU as a whole. Moreover, as the Study points out, the expected convergence "… could equally turn into a 'brake' on future developments towards harmonization as it, to some extent at least, 'fixes' the tax code of participating Member States" (p. 382). With CBT, the course indicated would be a common one from the very start, and although it would not be binding on the companies of the various member states, it would constitute a benchmark for future taxation in the EU member states, and would be based on principles commonly agreed upon by member states.

3. Under HST, firms would be encouraged to locate the parent company in the country with the most generous methods of determining the tax base. Moreover, an important factor in this location choice would be the existence of taxation on a consolidated basis. In the case of HST, unless common rules were established, groups would initially be subject to a variety of tax regimes, with some countries permitting consolidation and others not, and in any case there would be substantial differences in the applicable rules. Convergence would require

amendments to the laws of individual member states, but that would be a lengthy process and in the meantime there would be distortions and complications that need to be researched more thoroughly.

4. The most serious weakness of the CBT proposal would be that by introducing an additional system, parallel to the existing ones, there would be discrimination between those companies operating at the EU level and taxed under the new regime, and purely domestic companies taxed under the national system. This is not the case with the HST proposal, according to which pan-European companies would be taxed according to the same legislation applied to purely domestic ones. On the other hand, however, CBT does not differentiate between companies operating in the same market according to the country of residence of the parent company, while HST does discriminate in this sense, thus violating the Capital Import Neutrality criteria. CBT therefore seems more effective in levelling the field of play for those companies operating at the EU level, and this could be the most urgently important objective in terms of EU international competitiveness and economic growth.

5. When analysing the effects of the CBT option, we must acknowledge that for each individual company there may be different pros and cons to choosing the new system rather than continuing with the present one. These reasons are also likely to change over time, whereas the option would remain the same, at least for a given period of time. In addition, if the proposal were successful in achieving its main goal, i.e. a reduction in the costs of different sets of accounting, administrative and tax rules, then most companies operating at the EU level would be encouraged to adopt the common system, even though it were not as favourable as the domestic system from the general point of view (without taking these compliance costs into account). Thus it is not clear whether CBT would discriminate against purely domestic companies. Were this the case, the discrimination between pan-European and domestic companies implicit in CBT could in the end be easily removed by making the new system available to all companies. If this solution were accepted by the member states, it might also speed up the process of convergence of domestic tax systems towards a common consolidated tax base.

Simplicity and compliance costs

The main advantage claimed in favour of HST is that it does not require participating member states to agree in advance on a common system of accounting and taxation. All that is needed is a sort of "mutual recognition" of national tax laws whereby the member states participating in the system would allow group companies operating within their borders to be taxed (in contrast with the present situation) on the basis of the rules of the country of residence of the parent company. The system would be "single" for each company, but would not be "common" to all companies within the EU.

At first sight the HST proposal appears simpler than the CBT alternative, because it can be implemented "on a current legislation basis". CBT, on the contrary, requires the definition of a new system, with all the complications this may involve not only in defining the items to be included in the tax base, but also in applying a new set of rules by companies and tax administrators too.

HST appears simpler but entails a number of complex problems

However, as the discussion in the Commission's Study makes clear, on closer examination it would seem that HST will require those countries participating in the agreement to find detailed solutions to a series of problems, particularly in the accounting, tax and administrative fields. For example, as underlined in the Study (p. 384e 385), if auditing and assessments were left to the tax authority of the subsidiary's host country, each administration would need to know and apply no less than 15 sets of income tax rules. To avoid this complication, auditing and assessments should be left to the authority of the parent company's home country, but this would limit the jurisdiction of the subsidiary's host country. Another particularly complex problem, once again underlined in the Study, concerns the transnational reorganisation of companies, since a change of ownership could change the method by which the company has to compute its tax base. By going into these details, it appears that the problems to be solved are in the end not very different from, and much less burdensome than, those facing the construction of a Community tax system parallel to those in force in the member states, as envisaged in the CBT proposal. Some of these problems, like the ones mentioned before, seem to be further exacerbated under HST.

Common accounting standard: A good starting point?

The Commission's Study (p. 375) and Communication (p. 18) point out that the progress already made in harmonising accounting methods towards the use of IAS, and the prospect of a speeding-up of this process, along with financial integration and the creation of pan-European stock exchanges, "may generally help the future development of a common corporate tax base and to some extent the IAS may serve as a useful point of reference". Both HST and CBT would greatly benefit from common accounting standards, and the latter could provide a good starting point for discussion of both proposals. Starting from consolidated accounts drawn up in this way, it would be necessary to identify and define the adjustments required to identify groups' consolidated income tax liability. The approach could be more or less flexible. For example, the introduction of common methods could be limited to the main accounting items, and provisions could be made for countries to apply their own legislation (in other words, a sort of HST) provided the differences with respect to the tax base defined at Community level were small, transparent and did not produce any significant distortions. Clearly, the flexibility granted would benefit member states' sovereignty at the expense of the neutrality of the tax, especially if formula apportionment were adopted. The question of which is the best trade-off remains open, and the answer will essentially depend on the compromises needed to reach an agreement among member states.

Common accounting standards are a good starting point for tax harmonization

The political process

The Study recognizes that "a new system, for example Common (Consolidated) Base, would be preferable to the extent that it can be designed to address any particular areas of difficulty. However, implementation of HST is potentially a quicker process…" (p. 379) since it does not require, as CBT does, the agreement and drafting of a new tax code. In fact, another attractive feature of HST is that it does not require the unanimous agreement of all the member states, but can be launched by a subset of countries, thereby avoiding the risk of its introduction being hampered by the decision-making difficulties inherent to the principle of unanimity that still holds in the tax field.

In principle, CBT as well could be implemented by a subset of member states. Here, however, the starting point is an agreement at the Community level on the rules to be used in determining the common tax base. The procedures will be the traditional ones adopted by the EU, requiring unanimity in the Council (p. 402) even though the introduction of the new system is acknowledged as being possible under the enhanced co-operation procedure, too (p. 376).

HST could begin not only by "enhanced co-operation", but also on the basis of a voluntary agreement, a form of "Home State Convention", drawn up by the participating member states. These two institutional approaches would have different consequences, as is recognised in the Study (p. 375). However, either of them would undoubtedly have the advantage of flexibility, and could thus be implemented more rapidly than traditional decisional rules would allow. Nonetheless, it is also true that under HST the initial agreement might only involve those countries with very similar accounting regulations and tax bases, so that it would be difficult for other countries to join at a later date unless they adapted their domestic legislation in order to satisfy the "basic requirements" established in the initial agreement.

The question then arises as to whether it would not be more appropriate for such important rules as those governing productive activities in the Single Market to be discussed and agreed by all the member states. Similarly, the question arises as to whether it would be better to guarantee the flexibility demanded by both companies and member states, by allowing a subset of countries to reach an agreement to proceed on their own, as envisaged in the HST proposal, or by building a parallel system alongside the existing one and leaving individual firms to decide whether or not to participate, as envisaged in the common base proposals. With the CBT approach, once the member states had agreed a set of common rules, the new system would be allowed to function alongside the ones existing within the member states, the idea being that these would tend to converge towards the one established at Community level. Individual firms would be able to join the system (and, if this were introduced in a directive, to exploit the latter's effectiveness even before it was transformed into national law), and individual countries would not have to change their domestic legislation, apart from whatever is needed to

enable companies to choose the new common EU system. In the case of HST, on the contrary, firms would not be able to join the new system until the countries in which they operate had signed the agreement, and these countries might have to make significant changes to their own legislation before being granted membership. In the meanwhile there would be discrimination and distortion of competition between firms in different member states.

The level of tax rates

The quantitative analysis offered by the Commission's Study clearly highlights the important role of national tax rates in determining marginal and average effective tax rates. A move towards a common base system or home state taxation with consolidated profits and formula apportionment would not remove all the distortions of the existing system. On the contrary, as the tax policy scenarios simulated in the Study demonstrate, in some circumstances distortions might even increase.

Despite these results, the Commission's Communication concludes that: "at this point in time there is no convincing evidence for the Commission to recommend specific actions on the appropriation of the national corporate tax rates or the fixing of a minimum tax rate" (p. 9).

The policy suggested by the Commission will lead in the direction of harmonisation of the tax base, without any similar coordination of tax rates. Member states will maintain a great degree of tax autonomy, and be more inclined to agree on some co-ordination, but again the question arises of the cost to be paid in terms of efficiency losses.

Given the flexibility introduced by proposals such as HST and CBT, the distortions produced by existing national tax rates are likely to remain significant. In fact, the existence of different tax rates would undermine neutrality in the allocation of capital and productive activities even if the system were adopted by all companies and all countries, as in the United States and Canada. It is no coincidence that in federal States like the United States or Canada, the fiscal autonomy of member states is limited by the floor effectively provided by federal taxation. Moreover, the variation in rates is much smaller than that seen in the EU. Here, tax rates range from a minimum of 12.5% (in 2003 in Ireland) to over 40%. The comparable state rates for the United States range from 0% to 8%, whereas in Canada the provincial tax rates range from 14% to 17%. (Commission's Study, p. 420).

These considerations, along with the quantitative results we have, strongly suggest that some approximation of rates, together with tax bases, needs to be the next subject of EU corporate tax policy. Given the desire to leave some autonomy to member states with regard to taxation of corporate income as well, the introduction of a floor for corporate taxation, like the minimum VAT rate or that of federal corporate taxation in the United States and Canada, could be the best, most practical solution, for the following reasons.

Firstly, it would prevent excessive competition between rates, which is bound to increase along with the reduced possibility of competing through the tax base, due to the Code of Conduct, and tax-base co-ordination. One well-known example is Ireland's move to reduce the rate to 12.5% at the prospect of abolishing preferential tax regimes.

Differences in national tax rates must be minimised and/or a minimum tax rate introduced

Secondly, a minimum tax rate would be particularly useful in extracting the economic rents of foreign investment in the EU. International economic studies show that foreign investment is mainly driven by non-tax factors, such as the benefits of agglomeration and the extent of the market. Foreign investment in the Internal Market, principally made in order to take advantage of the benefits of this market, would not be discouraged by this minimum tax provided it were internationally competitive and withdrew only part of the rents that could not be produced elsewhere. At the same time, it could guarantee a higher overall tax revenue than the one achieved by the EU as a whole if the various member states were totally free to compete for that investment. This issue is bound to become increasingly more important in view of the future expansion of the EU: among the candidates for membership are countries like Estonia which have already reduced the corporate tax rate to zero. With a minimum tax rate, all countries would be put on a similar footing, but they would still be free to

apply higher rates. The latter would be sustainable as long as they reflected better services or infrastructures offered by the host country, or the presence of location rents that are not wiped out by formula apportionment.

To conclude then, it is encouraging to see that the Commission has launched a general debate on the question and problems of corporate tax co-ordination within the EU, and has proposed a consolidated tax base for EU businesses. However, the question of tax rates must also be addressed, and in fact there is a need to rekindle debate concerning the principles of corporate taxation to be adopted within the European Union (a debate which appears to have currently withered within the Community). This implies extending the scope of the debate to cover the entire question of taxation of investment income (dividends, interest payments and capital gains), and the corresponding rates, *inter alia* compared to those applied to labour income.

TO HARMONISE OR NOT TO HARMONISE?

PETER BIRCH SØRENSEN*

The recent report by the European Commission on the future of company taxation in the European Union is a welcome contribution to the current debate on the need for EU coordination of corporate income taxes. It provides a wealth of factual information on the existing corporate tax systems and identifies the current tax obstacles to cross-border investment within the Union. It also contains numerous pragmatic proposals for piecemeal corporate tax reform as well as several interesting ideas for more comprehensive reforms.

The Commission study offers a large number of estimates of the current effective tax rates on domestic and international corporate investment in Europe. These estimates reveal substantial variation in effective corporate tax rates across EU member states. The study shows that most of this variation can be traced to differences in statutory corporate tax rates. Despite this finding, the report does not advocate a harmonisation or approximation of corporate tax rates. Instead, it argues for a consolidation of the corporate tax base for European multinational companies.

In this comment I will start out discussing the various approaches to a harmonisation of the corporate tax base in Europe. Following this, I will consider the issue of tax base versus tax rate harmonisation and discuss alternative routes towards an improved co-ordination of corporate tax systems in the EU.

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Commission blueprints for tax base harmonisation

The aim of the Commission's proposals for tax base harmonisation is to provide multinational companies with a single consolidated tax base for all of their EU-wide profits. A consolidated tax base would have several advantages. First, it would eliminate the need for EU multinationals to deal with 15 different company tax systems within the EU. Second, it would eliminate the need to identify the "correct" transfer prices for transactions between related entities within the same multinational group of companies. Both of these simplifications could significantly reduce the costs of tax compliance. Third, a consolidated tax base would automatically allow the offset of losses in one member state against profits made in another member state, thereby securing greater neutrality in taxation. Fourth, a single tax base for all EU activities would eliminate unintended tax obstacles to cross-border mergers and acquisitions arising from the current lack of co-ordination of member state capital gains tax rules.

A single tax base for EU multinationals would lower tax compliance costs

The Commission report discusses four different blueprints for achieving a single tax base for EU multinationals: 1) Home State Taxation, 2) A Consolidated Common Tax Base, 3) A European Union Corporate Income Tax administered at the EU level, and 4) A Compulsory Harmonised Tax Base. The first three systems would be an optional choice for EU multinational companies, whereas the fourth system would be mandatory for all corporations in the Union, including those with only domestic operations.

A common feature of the four systems is that they all eliminate the current practice of separate accounting based on the arm's length principle for individual entities within a multinational group. Instead, European multinationals will be allowed or required to calculate their EU-wide profits under a single, consolidated tax base. As a substitute for separate accounting, a common formula would then be used to apportion profits to member

states for taxation. This profit allocation would reflect the multinational group's economic activity in each member state, as measured for instance by its sales, property or payroll in each country. All four systems assume that member states will maintain their right to choose their own tax rate on their apportioned share of the EU-wide profits of a multinational group of companies.

It is highly interesting that the well-known problems of transfer pricing and thin capitalisation under separate accounting have now motivated the Commission to seriously consider the alternative of formula apportionment which has long been advocated by many academics. The use of formula apportionment raises a number of difficult issues such as the problems of defining a group of related companies to be subject to formula apportionment; specifying the factors in the formula, and separating the EU tax base from corporate income deriving from non-EU sources. These and other technical issues relating to profit allocation have been excellently described by Joann Weiner[1] and will not be pursued here. Below I will just briefly state the main advantages and disadvantages of the four different company tax systems, as I see them.

The flexibility of Home State Taxation is also its main weakness

Home State Taxation

The system of *Home State Taxation* implies that EU multinationals would be allowed to calculate the consolidated profits on their EU-wide activities according to the tax code of their home state, that is, the member state where their headquarters are located. A German-based multinational would calculate its EU profits on the basis of German tax rules; a multinational group headquartered in France would calculate its total taxable EU-wide profits in accordance with French tax law, etc. From the perspective of national policy makers, the main advantage of Home State Taxation is that it does not require any harmonisation. All that is needed is that participating member states mutually recognise the company tax systems of the other countries participating in the system. For tax administrators the elimination of separate accounting should make life easier by eliminating the need to enforce complex transfer pricing rules for transactions within the EU. From the perspective of the business community, one attractive feature of Home State Taxation is that the system is optional: no company will be forced to switch to the system, but those that make the switch are likely to experience lower tax compliance costs, since they will no longer have to adhere to the different and sometimes conflicting national rules for the setting of transfer prices. Switching to a consolidated tax base will also enable companies to offset losses on operations in one member state against profits made in another member state, and corporate restructuring within a consolidated group will meet with fewer tax obstacles.

At the same time the attractive flexibility of Home State Taxation is also the main weakness of the system, since the existing differences across national tax systems will continue to create distortions. Apart from the fact that national differences in statutory corporate tax rates will remain, members of different multinational groups operating in any given EU country will be subject to different tax base rules if their parent companies are headquartered in different member states. In auditing the foreign affiliates of the domestic parent company, the tax authorities of the Home State will also depend on the assistance of foreign tax administrators who may not be familiar with the Home State tax code. Further, and perhaps more important, Home State Taxation will invite Member States to compete by offering generous tax base rules in order to attract corporate headqarters. Such competition would create negative revenue spillovers, since a more narrow tax base definition in any given home state would apply not only to income from activity in the home state, but to income earned throughout the EU area.

A Consolidated Common Tax Base

In contrast to Home State Taxation, the *Consolidated Common Tax Base* acknowledges the need for a harmonised set of rules defining the tax base for those companies opting for consolidation of their EU-wide profits. This will eliminate tax base competition for corporate headquarters and will create a more level playing field for European multinationals. Of course, the price to be paid for these advantages is the loss of national autonomy implied by tax base harmonisation. Moreover, the fact that the harmonised base would apply only to

[1] J. M. Weiner (2001a), "The European Union and Formula Apportionment: Caveat Emptor," *European Taxation*, vol. 10, October 2001, 380–388, and J.M. Weiner (2001b), "Formula apportionment in the European Union: a dream come true or the EU's worst nightmare?," paper presented at the conference on *Corporate and Capital Income Taxation in the European Union: The EU Commission Report on Companies' Taxation and Beyond* at FUCAM in Mons, Belgium, December 7–8, 2001. See also p. 10ff.

multinationals could create distortions between large and small firms operating within each Member State, since the small firms without international operations would still be subject to the domestic tax rules (unless they were allowed to opt for taxation according to the Consolidated Common Tax Base rules). It would also be a clear disadvantage that each national tax administration would have to deal with two different tax systems, that is, the new Consolidated Common Tax Base applying to multinationals, and the existing national tax rules relevant for domestic firms.

A European Union Company Tax

The same comments apply to the *European Union Company Tax* which is economically equivalent to the Consolidated Common Tax Base except that the latter system is supposed to be administered by national governments, whereas the European Union Company Tax is supposed to be administered at the EU level, with some or all of the revenue accruing directly to the EU.

A Compulsory Harmonised Corporation Tax Base

The fourth alternative in the Commission report is the so-called *Compulsory Harmonised Tax Base*. Under this system a single corporate tax base applies to all firms – domestic as well as international – in *all* member states. This will level the playing field between domestic and multinational firms and eliminate the need for national tax administrations to deal with two different tax systems. On the other hand, because it also harmonises the tax rules for small domestic firms, the Compulsory Harmonised Tax Base involves a greater loss of national tax autonomy.

Base harmonisation versus rate harmonisation

The large variation in the current tax treatment of European corporations is incompatible with the idea of a single market offering a level playing field for business competition. Because the level of corporation tax depends on the location of investment – and not on the shareholders' place of residence – the existing corporate tax differentials imply that corporate capital may flow to the countries offering the lowest effective tax rates, and not to the countries where capital can be most productively employed.

However, given the current differences in statutory corporate tax rates, a harmonisation of the corporate tax base might well lead to *larger* cross-country variations in effective tax rates, since a relatively high statutory tax rate is often compensated by relatively generous deductions from taxable profits. This is a serious weakness of the Commission's proposal to harmonise the corporate tax base without harmonising statutory tax rates. Indeed, the Commission's finding that effective tax rate differentials are mainly caused by differences in statutory tax rates would seem to suggest that rate harmonisation should take precedence over base harmonisation. On the other hand, if tax rates are harmonised, those member states who are forced to raise their statutory rates may try to reduce the effective tax burden by allowing more generous deductions for depreciation or by introducing special incentive schemes etc. This could mean that the intended approximation of effective tax rates would not be achieved. Moreover, in the absence of base harmonisation, companies will still have to bear the high compliance costs implied by the co-existence of 15 different corporate tax systems in the EU. These are two good reasons why corporate tax coordination should not focus exclusively on rate approximation.

Harmonising the tax base without harmonising the tax rates will lead to larger cross-country variations in effective tax rates

Base harmonisation with a minimum rate?

A system of Home State Taxation would allow EU member states to compete to attract corporate headquarters by lowering the rate as well as reducing the base of the corporation tax. A Common Consolidated Tax Base or a Compulsory Harmonised Tax Base would invite member states to lower their statutory tax rates to attract corporate activity (as measured by the property, payroll or sales entering the formula for apportionment of the tax base). Indeed, with a harmonised tax base a cut in the statutory tax rate would become a more transparent and unambiguous signal of a cut in the effective tax rate, and this might well intensify tax rate competition.

In recent years a growing number of observers and policy makers have come to see tax competition as a "healthy" activity which puts downward pressure on excessive government spending and promotes efficiency in the public sector. I am sceptical of this optimistic view of tax competition. While tax competition may force some reduction of public spend-

ing, its main effect will be to shift the tax burden from the mobile factors such as capital to the less mobile factors such as labour which is already overburdened with taxes in most European countries.[2] Moreover, if the political process is imperfect, allowing room for rent seeking, as the proponents of tax competition typically argue, the cuts in public spending are likely to take place in areas where political resistance is the weakest rather than in those areas where the public sector is most inefficient. If rent seeking is the problem, the appropriate policy response is to reform the political and public sector institutions which give disproportionate power to special interest groups. Tax competition seems a very indirect and poorly targeted instrument for countering rent seeking.

It is sometimes pointed out that corporate tax competition does not seem to be a problem since corporate tax revenues as a share of GDP have tended to be fairly stable over the last couple of decades. This argument overlooks two developments. First, the profit share of GDP tended to increase in many European countries during the 1980s and 1990s. On this basis corporate tax revenues ought to have increased. Second, corporate sector profits probably tend to account for an increasing share of total profits, since many industries dominated by proprietorships (e.g. agriculture) are in secular decline. Again this trend ought to increase the ratio of corporate taxes to GDP. The fact that this ratio has been roughly constant suggests that the average effective tax rate on mobile corporate capital does tend to fall over time. Indeed, the data suggest that corporate tax revenues relative to corporate sector profits have tended to decline in Europe since the early 1980s.[3] Unless policy makers want a systematic shift of the tax burden away from corporate capital, they should therefore take steps to neutralize the ongoing corporate tax competition in Europe. This could be done by combining the Commission's proposal for tax base harmonisation with a binding *minimum statutory corporate income tax rate.*

A minimum statutory tax rate would end corporate tax competition in Europe

The case for such a minimum rate is that a Member State which attracts capital from abroad by lowering its corporate tax rate will impose a negative spillover effect on the other Member States, since the latter will experience a fall in economic activity and tax revenues due to a capital outflow.

On the other hand, if a country decides to increase its corporate tax rate, it will induce an outflow of capital which will generate a positive spillover effect on other countries. Hence the case for a *harmonised* corporate tax rate is considerably weaker than the case for a *minimum* rate.

A harmonised corporation tax combined with residence-based personal taxation?

Under a system with a minimum rate, companies doing business in high-tax countries could nevertheless claim to be at a disadvantage vis-á-vis their competitors in low-tax countries. Also, from a social perspective, the European capital stock would still be inefficiently allocated as long as cross-country differences in source-based corporation taxes remain. This goes against the idea of a truly integrated single European market with a level playing field for all companies. Hence I believe that harmonisation of the rate as well as the base of the corporation tax should still be seen as a legitimate long-term goal for the European Union.

In the current era of euro-scepticism it may seem quite radical to propose a harmonisation of the rates as well as the base of corporation tax. However, it is crucial to keep in mind that the distribution of the tax burden across taxpayers depends on the *total* tax burden on income from capital. Apart from the corporation tax, this burden also includes personal taxes on income and wealth. An effective exchange of information among national tax administrations within the EU – as intended by the so-called Savings Directive which is currently being negotiated – would improve the ability of Member States to enforce personal taxes on the interest and dividends paid out by the corporate sector, as well as personal taxes on capital gains on shares. In the current regime with hardly any exchange of information, the potential for capital flight to foreign bank accounts which cannot be monitored seriously constrains the ability of individual Member States to impose taxes on income from mobile portfolio capital. By improving the ability of governments to tax foreign source income, information exchange will

[2] See P.B. Sørensen (2000), "The case for international tax co-ordination reconsidered," *Economic Policy*, 31, October 2001, 431–472.
[3] See p. 10 in E. Bretin and S. Guimbert (2001), "Tax competition for firms: to cure or to care?," paper presented at the conference on *Corporate and Capital Income Taxation in the European Union: The EU Commission Report on Companies' Taxation and Beyond* at FUCAM in Mons, Belgium, December 7–8, 2001.

strengthen national tax autonomy, making it easier for each Member State to choose its own preferred level of personal taxes on capital income. If they obtain more room of maneuvre in the field of personal income taxation, EU member states should be more willing to give up autonomy in the area of corporate taxation to eliminate the many distortions to the Single Market created by the current corporate tax differentials.

The point is that the corporation tax is really just a withholding tax, serving as a prepayment of the final taxes on the capital income originating in the corporate sector. The final tax burden is determined by the personal taxes levied on interest, dividends and capital gains, and these taxes will remain under the control of member state governments even if the corporation tax were harmonised. If a Member State finds that the harmonised corporation tax implies an inappropriately low level of tax on corporate-source equity income, it can rectify the situation by adding personal taxes on dividends and capital gains at the shareholder level. If it finds that the harmonised corporation tax is too high, it can use part of its apportioned corporate tax revenue to finance tax credits to shareholders.

Yet it must be recognized that the scope for residence-based taxes is limited by the possibility of capital flight from the EU area if important third countries refuse to co-operate on information exchange. This is a serious concern, although the OECD is making sustained efforts to induce the tax havens of the world to adopt a more co-operative attitude. Hopefully it is not too optimistic to expect that the tragic events of September 11 will pave the way for more international co-operation in the area of information exchange.

One should also keep in mind that The Best is often the worst enemy of The Good: complete corporate tax rate harmonisation may not be politically acceptable, so a call for complete harmonisation may block progress towards partial harmonisation. As long as corporate tax rates are kept fairly close in line, the remaining tax distortions to the location of corporate investment in Europe are likely to be small. Hence a reasonable compromise between economic efficiency and national tax autonomy might be to allow corporate tax rates to vary within a fairly narrow band, as proposed by the Ruding Committee back in 1992.[4]

A pragmatic strategy for the short and medium term

At the present stage of European integration it is politically unrealistic to expect EU member states to agree to anything like the ambitious proposals for corporate tax co-ordination discussed above. In the short and medium term, a much more pragmatic strategy for co-ordination will have to be followed, as fully acknowledged by the European Commission. The Commission's proposals for targeted measures to eliminate particular tax obstacles to cross-border investment are a natural part of such a strategy.

I also agree with the Commission that the recent adoption of a statute for the "European Company" ("Societas Europaea") offers an opportunity for experimenting with the development of a common consolidated tax base for this group of firms. The European Company statute harmonises several aspects of the company law of member states and allows the Societas Europaea's (S.E.'s) to submit their financial accounts to investors on a consolidated basis for all EU countries. However, in its present form the statute still requires an S.E. to keep separate tax accounts for each member state in which it operates. As argued by Sylvain Plasschaert[5], it would be natural to develop a single tax code or at least a single consolidated tax base for the S.E. to be applied to all of its EU-wide activities. Such a common tax code would make the S.E. statute much more attractive for companies and might serve as a focal point for Member State corporate tax codes, thereby facilitating a gradual and spontaneous adaptation to a common set of corporate tax rules. But of course, if Member States do not really want any approximation of corporate tax rules, they will be reluctant to allow the introduction of a single tax code for the European Company.

The statute for the "European Company" offers an opportunity to develop a single tax code

Perhaps things will have to get worse before they can get better: it may be that the costs and inequities stemming from the lack of co-ordination of national tax systems will have to become more dramatic before EU Member States mobilise the political will to co-operate more closely on matters of tax policy.

[4] See the report of the Committee of Independent Experts on Company Taxation, European Commission, Brussels, 1992.
[5] S. Plasschaert (2001), "The EU consolidated income tax revisited," paper presented at the conference on *Corporate and Capital Income Taxation in the European Union: The EU Commission Report on Companies' Taxation and Beyond* at FUCAM in Mons, Belgium, December 7–8, 2001.

THE PROS AND CONS OF FORMULARY APPORTIONMENT

EMIL M. SUNLEY*

The EU Commission report[1] highlights remaining tax obstacles to cross-border economic activities in the Internal Market and proposes a two-track approach of targeted measures for immediate action and comprehensive solutions to launch a wider debate. This report not only will stimulate debate within the EU, as did the Ruding Report of 1992, but also could lay the groundwork for significant reform of corporate income taxation within the EU. Unlike the Ruding Report, the Commission report does not recommend approximation or harmonisation of corporate tax rates.

The Report analyses four comprehensive options: home state taxation, common consolidated base taxation, a European corporate income tax, and compulsory harmonization of existing tax bases. All options could simplify compliance costs for companies by providing a consolidated corporate tax base for EU-wide activities. Cross-border loss offsets would be fully allowed. Except for the European corporate income tax (under which all the revenues would accrue to the EU), all options would require a mechanism, such as formulary apportionment, for allocating the tax base and revenue among Member States.

Formulary apportionment using the same factors would simplify tax compliance

Formulary apportionment, which is used in the United States, Canada and Germany at the subnational level, will not produce an allocation of the tax base that would be the same as that under separate accounting and arm's length pricing. It is for this reason, that the OECD has traditionally been cool to formulary apportionment. In 1979, the OECD Committee on Fiscal Affairs concluded:

> Such method would necessarily be arbitrary, tending to disregard market conditions as well as the particularly circumstances of the individual enterprises and tending to ignore the management's own allocation of resources, thus producing an allocation of profits which may bear no sound relationship to the economic facts and inherently running the risk of allocating profits to an entity which is in truth making losses (or possibly the contrary).[2]

The Report concludes that a major advantage of the comprehensive approaches is that transfer pricing and cost allocation issues would be eliminated. This would provide greater certainty for taxpayers and reduce the compliance costs incurred by taxpayers and the tax authorities.

The EC report suggests that the allocation of income could be based on the taxpayer's value-added within each Member State, and not on sales, property, and labour costs, as in the United States. The allocation could be based on macro data at the Member State level or micro data at the enterprise level. The EC report recognizes that there are a lot of details, including the apportionment factors, to be worked out if formulary apportionment is to be adopted.[3] This probably cannot be done until there is general agreement to apportion income among Member States. The experience of the United States suggests that it would be most important that each Member State uses the same apportionment factors to allocate income among the Member States.

Formulary apportionment would simplify tax compliance for businesses and this would be a significant reform. However, formulary apportionment may increase tax competition and could lead to manipulation of the tax base. Transfer pricing issues will not necessarily go away under formulary apportionment.

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[1] *Towards an Internal Market without Tax Obstacles*, Comm(2001) 582 final.

[2] OECD, Committee on Fiscal Affairs, *Transfer Pricing and Multinational Enterprises*, 1979, p. 14.

[3] The paper presented at the conference by Joann Martens Weiner, "Formula apportionment in the European Union: A Dream Come True or the EU's Worst Nightmare" outlines the key technical issues that would need to be addressed.

Under separate accounting and arm's length pricing, countries compete to attract the marginal investment, which brings into the country's tax base the marginal return on that investment. Under formulary apportionment, attracting the marginal investment brings into the country's tax base the average return on investment, as consolidated profits are allocated based on the agreed formula. For example, if profits are allocated based on each company's EU-wide value added, a country would gain if it can attract a low profit labour intensive activity. The additional value added attracted to the country will increase the country's tax base by the average EU-wide profit per unit of value added, which could be considerably greater than the profits attracted to the country when measured under separate accounting..

Formulary apportionment will not eliminate the problems of transfer pricing if either sales or value-added are included in the apportionment factors. If the corporate income tax is administered where the enterprise is headquartered, the home-state country will want its companies to maximize value added (or sales) in the country. This could be done by under-pricing raw materials and other purchases from related parties and over-pricing sales to related parties. As only the home-state country will audit the enterprise, other Member States in which the enterprise operates could be adversely affected without having a seat at the table.

One final point, both home state taxation and common consolidated base taxation would be optional, at the insistence of business representatives on the panel assisting the Commission. Options can be troublesome. There is clearly a risk of adverse selection, reducing revenues for the Member States. Also, options will necessarily add complexity as special rules will be needed when enterprises enter and leave groups of companies. Will enterprises be bound for a period of years by any election to be taxed under home state or common consolidated base taxation?

FURTHER RESEARCH NEEDED ON COMPREHENSIVE APPROACHES

MARCEL GÉRARD*

Last October, the EU Commission released an important report on Companies' Taxation in Europe.[1] That document, expected for a long time already, was the core of a conference jointly set up by CESifo and Belgian FUCaM's Arpege[2], held in Mons, Belgium, on December 7–8. Though the core of the conference was the discussion of the report, its scope was actually broader and a selection of contributing papers will be published in a coming issue of *Ifo Studien*.

A new direction: moving to a consolidated tax base system

The Commission Report includes extensive empirical work, actually a computation of effective tax rates, dedicated to evaluate distortions implied by national tax systems, the identification of cross-border obstacles to the Internal Market and the design of mechanisms for tackling those company-tax obstacles.

Before briefly commenting on the directions suggested by the Commission, I'd like to stress two other points.

The new meaning of integration

First, the new directions suggested by the Commission, i.e. moving towards a consolidated tax base system, characterises an evolution of the way to conceive a tax system as well as of the economic environment of the tax system.

To be clear, a quarter of a century ago, when the Commission already formulated tax harmonisation proposals, it did so in a framework where the typical investor was an individual resident of the same jurisdiction as the company. Then the word "integration" was understood as integrating the domestic individual shareholder and the domestic company. In that framework the ideal system was no doubt imputation, a system adopted by many countries including France and Germany. In his 1977 book, *Public Policy and the Corporation*, Mervyn King writes that the EU "harmonisation proposals are concerned solely with the taxation of distributed profits, and consist of two recommendations. The first is that harmonisation should be under the imputation system with the basic rate of corporation tax lying within the range 45–55%. (...) The second of the EEC Commission's proposals is that 'the tax credit shall be neither lower than 45% nor higher than 55% of the amount of corporation tax at the normal rate on a sum representing the distributed dividend increased by such tax'".

In contrast, Fuest and Huber conclude their 2001 paper "Is corporate-personal tax integration in open economies counter-productive?" with the statement that "in an open economy, where the marginal shareholder is a foreigner, it is not desirable to offer double taxation relief for dividends paid by domestic firms to domestic shareholders". Indeed, the world has changed. The typical (marginal) investor is no longer a resident individual but a foreigner, and possibly a foreign company, investing in a worldwide, at least a European-wide, operating company. Thus the word "integration" now refers to a multinational group.

Such an observation helps us both to understand the recent change in the German tax system as well as the suggestion by the EU Commission of a new direction for tax policy.

Effective tax rates as a determinant of investment

Second, the extensive computation of effective tax rates conducted by the Commission deserves two comments. On the one hand, one can regret that the services of the Commission, presumably

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[1] Comm(2001) 582 final.

[2] FUCaM's Arpege is the Workshop for Economic Policy and Business Management of the Catholic Faculties of Mons, Belgium.

due to the mandate they had received, limited their empirical investigation to the levies directly operating on capital income, neglecting the levies on other factors, first of all on labour; indeed many companies' decisions are based on respective costs of factors and using one or another are no independent decisions. To be simple, you can in some way shift the burden of a capital income tax on the supplier of labour. On the other hand, and despite the fact that the Commission recognises that taxation is not the single determinant of investment, the importance of effective tax rates as an actual determinant of companies' decisions has not been tested or extensively discussed by the Commission; however, a growing literature is now developing on the empirical relevance of those measures, especially regarding foreign direct investment decisions. Two papers presented at the Mons Conference are good examples of such studies, i.e. de Mooij and Ederveen's "Tax and foreign direct investment: a synthesis of empirical research" and Buettner's "The impact of taxes and public spending on FDI: an empirical analysis of FDI-flows within Europe".

Comprehensive solution

In its attempt to pave the way for a further European Tax Policy, the Commission says that there are essentially two approaches which could be envisaged for tackling the company tax obstacles in the Internal Market – among them cross border loss-compensation and transfer pricing issues: targeted solutions which seek to remedy individual obstacles, and more comprehensive solutions which seek to address the underlying causes of the obstacles. The latter approach, the Commission says, since providing EU businesses with a single common consolidated tax base for their EU activities, would address most of the tax obstacles to cross-border economic activities that it has identified.

The report discusses the pros and cons of four ways of designing such a comprehensive system. The first two ways imply a consolidated base for all the European activities of a given multinational company: under the so called "Home State Taxation", the multinational company tax base is computed in accordance with the tax code of the company's home state, while under the "Common Consolidated Base Taxation" a European definition of the tax base is presented alongside with present national rules. In both cases, the tax base is then apportioned among the Member States and taxed at rates defined by each of those jurisdictions according to the subsidiary principle. The third way considers a "European Corporate Income Tax" which could be optional or compulsory for large multinationals, implying levying the tax at EU level and possibly attributing of part of the revenue directly to the Union. The last way is to set up a single harmonised tax base and system as a replacement for existing national systems.

The Commission itself, however, recognises that its findings are based on the current stage of the development of the research and that further work would be necessary to implement any of the comprehensive approaches.

One can question what is really expected from the move to a comprehensive system and discuss the capacity of such a change to reach those expectations. Indeed, experience of other large federations shows that such a move is no guarantee of say, tax neutrality with respect to the location of either the parent entity or the affiliates.[3]

A comprehensive tax system does not guarantee tax neutrality with respect to the location of parent or affiliates or other decisions

Should we expect the tax system to be neutral with respect to three decisions of the multinational, i.e. the decision of how to finance an investment, by issuing shares, issuing debt or using retained earnings, the decision of how to set up an affiliate, either as a subsidiary or as a branch or permanent establishment, and the decision of where to locate the affiliates or the parent entity? Such expectations can be reached under a separated tax base system as well as under a consolidated tax base system. Formal conditions can be derived quite easily,[4] which have in common the request of a full harmonisation of bases and rates. Keeping such a theoretical result as a benchmark, full harmonisation of tax rates and bases can be interpreted as an extensive approximation of tax rates and bases.

Especially, implementing the Comprehensive Business Income Tax proposed in 1992 by the U.S.

[3] See e.g. Goolsbee, A. and E. Maydew, 2000, "Coveting thy neighbor's manufacturing: the dilemma of state income apportionment", Journal of Public Economics, 75, pp. 125–143 and Weiner, J., 2001, "The European Union and formula apportionment: caveat emptor", European Taxation, 41, pp. 380–388.

[4] Ssee e.g. my forthcoming CESifo discussion paper "Inter-jurisdictional company taxation in Europe, the German reform and the new EU suggested direction".

Treasury – a system which combines separated tax base, tax exemption at recipient level and non-deductibility of interest payments[5] –, can be *a priori* as good a candidate as a consolidated tax base system. However, the superiority of a consolidated tax base approach regarding cross-border loss-compensation can be recognised.

Moreover, adopting a consolidated tax base with apportionment doesn't eliminate transfer pricing issues, nor other tax shifting strategies.[6] Indeed, suppose a production entity and a distribution entity, and that the apportionment is based on value added ; then the distribution of the tax base among the two jurisdictions can be modified by manipulating the wholesale price.

The point is that neutrality, in the meaning of the word mentioned above, requires that the decisions of the firm have no influence on their tax liabilities. In that respect it is not without interest to imagine, as an ultimate target, to set up a system where the corporate income tax is a European single system with tax revenues collected by the Union and distributed between the Union and the Member States according to criteria independent of firms' behaviour.

The final remark of the Commission Report is full of hope, however. Indeed, as already mentioned, the Commission recognises that its findings are based on the current stage of research and that further work would be necessary to implement any of the comprehensive approaches. Presumably it is an invitation to the academic community and other experts to join the Commission in that effort.

[5] See US Treasury Dept., 1992, "Report of the Department of Treasury on integration of the individual and corporate tax systems: taxing business income once".
[6] on that issue see a.o. Nielsen, S.B., P. Raimondos-Moeller and G. Schjelderup, 2001, Formula apportionment and transfer pricing under oligopolistic competition, CESifo Working Paper 491.

FOOD SAFETY THROUGH MORE REGULATION?

PRO: FOOD LEGISLATION MUST BE EFFECTIVE AND EFFICIENT

DAVID BYRNE*

To me, the fundamental question is not "Do we need more or less legislation?" The key question should be "Does it work?" The challenge is to put in place legislation that the does the job effectively and efficiently.

The European Commission has publicly stated its commitment "to ensure that European consumers have access to the safest possible food supply in the world". This is a firm statement of intent – a top priority. To achieve this, a framework of appropriate regulation and control is of paramount importance. We simply cannot hope to achieve our aims without it.

Consumer confidence and the confidence of our trading partners are vital to the success of the European food industry both within the internal market and in the global market place. A safe European food chain from farm to fork, correctly regulated and effectively controlled, is the way forward towards building and maintaining confidence in our food supply to the benefit of *all* our stakeholders: producers, processors, retailers, exporters and, most importantly, consumers.

A White Paper on Food Safety was adopted just over two years ago and since then a significant number of positive steps has been taken. A key step was the adoption of a Regulation that lays down the general principles and requirements of food law, procedures in matters of food safety and the establishment of the European Food Safety Authority (EFSA). This is a great leap forward – the cornerstone of our strategy.

The system for the development of food law, both scientific advice and the procedures for developing legislative proposals, must be as transparent as possible. We need to promote an open-minded dialogue and be able to demonstrate visible balance between all stakeholders to ensure maximum transparency of information on which proposals for food safety legislation will be based.

The EFSA will provide this transparency. Its independent scientific advice will provide the basis on which the Commission will take risk management decisions. The EFSA will be an authoritative body of expertise covering all scientific matters, which may have a direct or indirect effect on the safety of the food supply, from primary production and animal feed through to the supply of food to consumers.

We will propose legislation where it is prudent and necessary to do so. But I would stress that I have no desire to burden the food industry with regulation upon regulation, or to propose legislation for legislation's sake. Nor do I have any wish to stifle innovation. I have also placed particular emphasis on the need to ensure that there are sufficient safeguards to facilitate the continued existence of the wide range of smaller, traditional food production processes and businesses within the European Union.

My aim is simply to create a modern and flexible system, with effective and open organisational structures, capable of regulating and controlling a highly complex, highly diverse and in many cases highly technologically advanced food industry, with the aim of guaranteeing the maintenance of basic high standards. To promote quality, choice and diversity, underpinned by relevant and effective safeguards.

* European Commissioner for Health and Consumer Protection.

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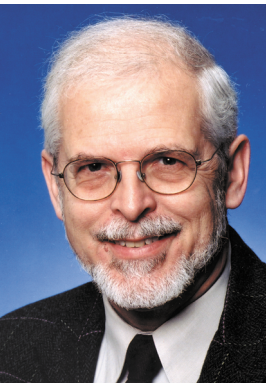

CONTRA: FOOD SAFETY AND MARKET FORCES

JOHN E. CALFEE*

The past century has seen three remarkable advances in food and health. First, foods are cleaner, fresher, and far less likely to be dangerously contaminated than they once were. Second, the discovery and isolation of essential micro-nutrients, ranging from vitamins C and D to folic acid, and subsequent improvements in diets and foods, have prevented millions of deaths and serious illness. Finally, the green revolution and the adoption of modern agricultural methods have greatly increased the efficiency of farming. This, combined with commensurate improvements in food processing, storage, and distribution, has so reduced food costs as to make even moderately developed nations nearly immune to the catastrophes of famine and mass malnutrition.

These advances have been brought about largely through the application of technology, including pasteurization; cheap and reliable canning, refrigeration, and freezing; and the improvement of the genetic components of nearly every basic foodstuff including wheat, rice, and other widely consumed vegetables and fruits. Genetic manipulation was accomplished through crude, time-consuming methods such as cross fertilization, but the results allowed food supplies to grow faster than population despite the most rapid population increases ever seen.

All this was achieved primarily through competitive forces as farmers and manufacturers seized upon new technology and improved the general welfare while pursuing private gain. Regulatory forces, such as nutritional labeling, have played at most a very small role. In the case of the United States, restrictions on label contents have impeded competitive improvements in foods and in information about foods.

The question now is whether the forces that have achieved so much will be blunted by regulatory restrictions. Irradiation, a powerful and harmless method for decontamination, has been stymied by regulation and alarmists. Far more important, however, is the fate of so-called genetically modified organisms (GMOs), sometimes called biotech foods. Regulatory and alarmist fears have threatened to impede or completely halt this tool for improving foods.

Essential aspects of GMOs have been suppressed in the public debate. The first is the simple fact that what is new is not the modification of the genetic composition of food, but the means for achieving it. Modern biotechnology offers infinitely faster and more precise methods for doing what used to be done by trial and error in extremely crude fashion. Whereas investigators once had to wait years or decades to see whether an experimental plant yielded new benefits without offsetting harms, one can now predict and assess the properties of new variants in far less time.

Even more important is the ability to target modern gene technology at precisely what is essential, without the dangerous excess baggage in traditional plant evolution whether achieved by nature or investigators. Plants naturally contain pesticides – thousands of them – but those pesticides can threaten humans as well as pests. Carcinogens and other toxins are common. Biotechnology methods, with their greater precision, can yield plants with new pesticides that threaten only pests, not people. The same principle of safer targeting applies to other advances such as making plants more productive or resistant to freezing, without the myriad

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unknown changes that accompany old-fashioned genetic manipulation.

The implications are clear. The popular assumption that GMOs are inherently riskier than traditional GMO foods is misconceived. Policies based upon that misconception are likely to mislead rather than guide consumers, as U.S. Food and Drug Administration has recognized. Worse, such policies create an irresistible invitation for the creation of vested interests. The protection of inefficient producers from new entrants, especially firms in poor nations, has been a fixture in international politics. As the United Nations has pointed out, biotech foods could be a boon for the people of poor nations, but unnecessary restrictions on biotech foods in the EU and other wealthy nations could forestall the spread of the benefits of biotech foods.

Stability, Subsidiarity and Sustainability – Cornerstones of a European Fiscal Policy for Tomorrow –

Hans Eichel*

Fiscal Policy in a complex environment

The world in which we live is a world of rapid change. New technologies and the ever faster world-wide integration of economies increasingly touch on the life of each individual. The multitude of products is growing just as is the multitude of life models. This implies big challenges not only of an economic but also of a social nature – for each individual citizen and for entire nation states. In order to take advantage of the chances connected with the epochal developments and to effectively meet the risks involved, the public authorities have to assume responsibility, too. Mastering change means formulating national and international rules and, if necessary, the spending of money.

In formulating political strategies we must take account of a number of different general conditions.

- *Borders lose significance*
  Our future lies in Europe. The introduction of euro notes and coins on 1 January 2002 is a clearly visible sign for the increasing integration of Europe. The smooth process has shown impressively how much the people in the member countries have already accepted the thought of a common Europe. At the beginning of the last century this would have been unthinkable. Its early decades were characterised by terrible wars and animosity. Today many vacationers from European neighbouring countries provide for a lively exchange of views and customs. Furthermore, a tight economic network has developed for the benefit of all involved. The enlargement of the European Union will increase this sphere. Higher mobility of consumers and products as well as increased price transparency contribute – not only in Europe – to the growing competition of economies.
  Fiscal policy must do both, contribute to a stable currency and improve the locational attractiveness. In the Euro area this no longer happens exclusively in the national context; rather, national and European aspects of fiscal policy are discussed in the framework of fiscal and economic co-ordination with the partner countries and the European Commission.
- *Population ageing is progressing in the Western industrial countries*
  More and more people are reaching old age. Low birth rates and rising life expectancy result in serious changes in the age composition of the population. This demographic development puts the spotlight especially on the question of the required measures of social security. It is necessary to guarantee the long-term capability of these systems. Reforms of the social security system must coincide with the provision of the necessary financial resources.
- *Protection of the natural environment continues to gain in significance*
  Nothing can replace unmarred nature. The welfare of present and future generations depends in especially large measure on a most careful interface with the environment. In particular, environmental problems do not stop at national borders. Despite all successes to date, additional efforts are required to reduce environmental damage. Here, fiscal policy can make a contribution by providing the appropriate incentives for environmentally correct behaviour. Germany's ecological tax reform serves as an example.
- *The knowledge and information society must be furthered*
  When natural resources become scarcer, know-how becomes ever more important. Education and science are irreplaceable resources. They are increasingly gaining in significance especially against the background of accelerating technological competition. In March 2000 the European heads of states and government therefore set the strategic goal of making the European Union the most competitive economic region of the world within ten years. Unlike any other process, the goal of moving to a knowledge-based society has underlined the necessity of improving the quality of the budget.

Unlike any other policy, fiscal policy is called on to create the prerequisites for a secure future and to contribute to the welfare of present and future generations. It reflects the economic develop-

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ments, the major political decisions and social issues of an economy. It must not only provide the funds, it must at the same time help to shape the future.

Securing stability – creating growth and employment

Even a cursory review of the major determinants of modern politics clarifies the necessary direction of fiscal policy. It is become more and more necessary to think and act in a cross-border way in order to guarantee a stable development. In an increasingly global world, fiscal policy can no longer gear itself to national circumstances. Therefore the EU member states took measures some time ago to coordinate their fiscal and economic policies more closely. All of them agree: solid state budgets are a major prerequisite for sustained non-inflationary growth and more employment. Solid fiscal policy thus simultaneously makes a contribution to the stability of the common European currency.

Successful consolidation of the public finances is the essential pillar for a stable economic environment in the future. Low government deficits or the renunciation of government borrowing, are the contribution fiscal policy can make to low prices and interest rates. They therefore contribute not only in the short term but also in the long term to an improvement of the supply and the demand sides of the economy. A growing scope for fiscal spending may be utilised in the long term for important investments and can thus add to the growth potential of the economy. Furthermore, reducing the public debt is the most important contribution of fiscal policy to generational solidarity. We must not overburden future generations with our debts, but must leave them scope for their own creativity. For these reasons, too, budget discipline was firmly anchored in the EC Treaty of Maastricht. The rules of the EC Treaty were supplemented and clarified by the Stability and Growth Pact.

In a federally organised state, all levels of government must help to meet the EU demands. About this there is agreement in Germany among the federal, state and local governments.

Individually and jointly we must help to honour the agreement at the European level. In Germany, fixing a strict spending target is an important component of the intra governmental rules.

According to experience to date, the existing rules and regulations have proved worthwhile at the European level. Since the early 1990s, EU member states have succeeded in markedly reducing their budget deficits. Many member states already achieve surpluses. The scope for financial action is increasing.

A one-sided orientation towards consolidation, however, would not meet the complex demands on a modern fiscal policy. An important task is the stabilisation of the business cycle. The so-called automatic stabilisers must be allowed to even out cyclical fluctuations. This means in principle that in a downturn the cyclical increase in the budget deficit must be tolerated and must not be prevented by raising taxes or cutting expenditures. Correspondingly, in an upswing the cyclical improvement in the government budget must not be erased by higher expenditures or tax reductions.

The European agreements put limits on this process. The commitment to the goal of producing a balanced budget in the medium term prescribes the scope for policy action. This is especially true if in the preceding upswing the corresponding scope for letting the automatic stabilisers work was not increased.

This has primarily two causes. It is not always easy to differentiate in each situation between cyclical and non-cyclical effects on the government budget. In addition, the impetus of comprehensive tax reductions is an important instrument of a fiscal policy that supports growth and employment. This is especially true against the background of increasing global competition among companies and locations. The challenge therefore is to find a balanced mix between the demands of the Stability and Growth Pact and the growth and cyclical needs. In order not to jeopardise the basic stability orientation of fiscal policy, strict spending discipline must therefore be the basis of all plans for tax reform.

The Federal Government has taken account of this in formulating its fiscal policy. The important pillars of German fiscal policy are a comprehensive reduction of government debt on the one hand and the promotion of growth and employment by a corresponding design of the tax system on the other.

The tax system must be effective and fair. This implies that tax policy must guarantee that the

funds for the necessary government tasks are available in the long term in order to promote stability. In addition it must and can set the appropriate signals, not only for a growth and employment promoting development but also e.g. for dealing responsibly with our natural resources. Europe-wide harmonisation of energy taxation would be an important step towards reducing cross-border environmental problems. Tax policy which is to meet the demand for fairness is strictly orientated towards the principle of capability, closes tax loopholes, fights illegal employment, promotes the family and supports the creation of a fully funded pension system.

Safeguarding subsidiarity – taking account of national and regional differences

One of Europe's greatest strengths is its diversity. Besides uniform rules like those entailed in the Growth and Stability Pact, the competition for ideas and problem solutions benefits everybody. Here it is important to realise that different problems require different answers. It is not only the special factor of German unification which for Germany requires different approaches in certain areas than in other European countries. The continuing challenges posed by German unification are an essential difference, however.

In eastern Germany the results to date are good: labour productivity and per capita income have more than doubled since the early 1990s. The infrastructure has been improved and brought up to the latest technical standard. Close to 350,000 newly founded firms have withstood the market test. Despite all of the successes achieved, the economic reconstruction is far from complete. This is shown, for example, by the very different economic structure and the high unemployment rate, which is twice that of western Germany.

The main goal is and continues to be to strengthen the inherent dynamics of the east German economy so that modern innovative and competitive economic regions may develop. This was the major motivation for the design of the Solidarity Pact II between the federal and state governments that extends the Solidarity Pact I, which will expire in 2004, and puts the support of eastern Germany on a reliable footing up to 2019.

Other European countries, too, have their very specific problems. Different economic structures, different traditions, different age structures or different levels of infrastructure in the European member states will not make uniform policy approaches desirable or possible in the future. Common institutions and binding rules will have to take account of this circumstance just like "soft" types of co-ordination in the form of political dialogue or pure information exchange. In the future, too, fiscal policy in Europe must entail the possibility to react adequately – together or individually – to specific challenges.

Differences alone in size and structure of economies may require different measures. Thus the ability of the automatic stabilisers to even out cyclical fluctuations also depends, besides the cyclical sensitivity of the budget, on the size and structure of the economy. The more open an economy, for example, the more government stability measures are likely to fall flat, because the additional demand can be met to a large degree by higher imports. In the course of continuing European integration and growing globalisation, the degree of openness of economies will tend to increase further – and the cyclical effectiveness of automatic stabilisers is likely to decline further. Sustained growth will therefore always require a full set of various measures that will differ from country to country.

Achieving sustainability – improving the quality of the budget

Sustainability has many aspects. It cannot be reduced to economic, social or ecological questions. A common European goal is, therefore, an economically efficient, socially fair, and ecologically sustainable development. In Germany, the continuation of budget consolidation and a reduction of taxes are important components of the strategy to achieve this goal. They must be supplemented by a strengthening of future-oriented areas of fiscal policy and the formulation of approaches to coping with the burdens of population ageing.

For intensifying an economy's competitiveness and ability to meet future challenges, the transition to a knowledge-based society is of central importance. Expenditures for conserving old structures must be reduced in favour of future-oriented spending. This does not only apply to physical investment. Just as important is spending on human capital and measures for the promotion of the family. School build-

ings become an expenditure of relevance for the future only through teachers. Improved childcare possibilities improve the compatibility of family and job and thus contribute to higher growth. Responsibility for education rests with government at all levels. Future-oriented fiscal policy also encompasses inducements for environmentally desirable behaviour. Placing taxes and fees on the consumption of environmental resources creates signals for dealing carefully with natural resources. Future-oriented expenditures which can no longer be classified by the old dualism of "good investment spending" and "bad consumption spending" may also be found in the area of research.

On the European level, the topic of "generational fairness" in particular is closely linked to the discussion of sustainability. All Western industrialised countries are – to a lesser of greater degree – affected by the same problem. The data on shrinking populations are already known. Nothing will change that in the short term. The effects of this development depend on the evolution of many other variables like growth, immigration, women's labour force participation rate, working life, to mention just a few. At present the baby-boom age-groups make up the centre of the labour force. When, in 20 to 30 years' time, these cohorts reache retirement age, the effects of the demographic change will become clearly visible. This does not mean, of course, that policy can wait until then. It is today that the necessary strategic decisions must be made.

Pensions are only one, albeit important, example of the problems facing us. Similar problems are emerging with respect to statutory health insurance or civil service pensions.

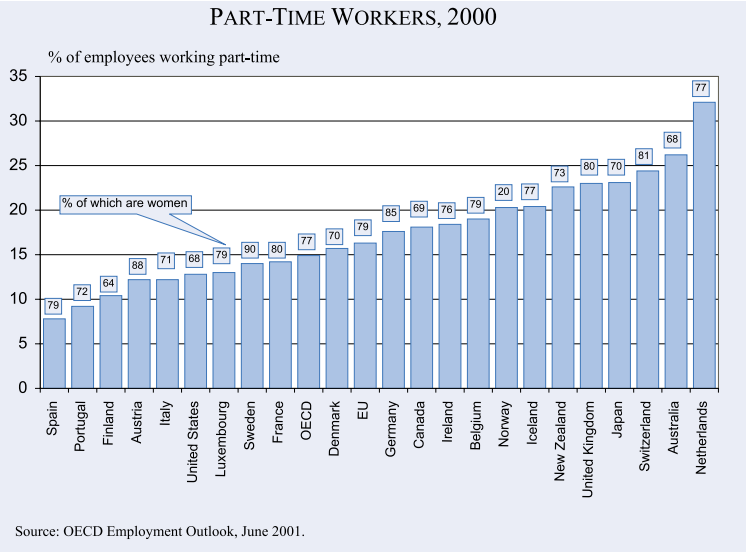
Welfare and other government transfers are also used to meet daily needs. They, too, will not be untouched by the demographic developments. Besides the provision of financial public resources through budget consolidation or an increase in the labour force, further routes to an appropriate reform of the social security systems must be sought and must be travelled. In this context, appropriate instruments for increasing self-provision, in particular, must be developed.

The interest of present and future generations must be balanced in an adequate way. In a world in which borders lose significance, here, too, we cannot consider exclusively national circumstances. Against this background, the reduction of the public debt and the creation of an adequate scope for self-provision are only two elements of the required answer to the demographic question. Increasing immigration of qualified workers also contributes to the growth of the labour force, and foreign investment promotes the creation of the necessary jobs. In this way, too, the capability of the social security systems can be safeguarded. In this sense, an improvement of the attractiveness for employees and entrepreneurs of their respective locations represents also a major contribution to the sustainability of fiscal policy. To maintain good neighbourliness, however, unfair methods must be prevented, as is already the case on the European level with the prevention of unfair tax competition.

Concluding remarks

A modern fiscal policy must meet a multitude of demands. It is much more than the mere administration of the revenues and expenditures of the economy. Fast-paced times are beset by high uncertainties. Predictability is therefore also of great importance to fiscal policy. This is especially true against the background of a common European currency. Wrong developments of fiscal and structural policies in individual countries can directly affect developments in other countries. In order to prevent that, the agreements on the European level must be adhered to. The European rules and regulations and the common institutions must, however, retain enough flexibility in the future to take account of the prevailing differences among individual states and regions. In this way we may succeed in safeguarding a sustainable development, which combines economic growth with social security and ecological compatibility. For the benefit of all Europeans.

WOMEN DOMINATE PART-TIME WORK



Source: OECD Employment Outlook, June 2001.

Part-time work in OECD member countries averaged 15.3% of total employment in 2000. At 16.3%, the European Union lies above the average, but looks modest compared to countries like Australia (26.2%) or Japan (23.1%). Part-time work is lowest in the central east European countries like the Slovak Republic (2.1%), Hungary (3.2%), and the Czech Republic (3.3%), although Poland weighs in at 12.8%. The southern belt (Spain at 7.8% and Portugal at 9.2%) has also visibly less part-time employment than the rest of Europe, where the Netherlands at 32.1%, Switzerland at 24.4% and the United Kingdom at 23% have the highest shares of part-time workers.

Over the decade of the 1990s, part-time work has increased most markedly in Luxembourg where it rose from 7.6% to 13.0% and in Ireland where it grew from 9.8% to 18.4%. In the EU the incidence of part-time work went up from 13.3% in 1990 to 16.3% in 2000, while in the OECD as a whole, the share of part-time employment increased from 14.3 to 15.3%.

It may not be surprising that part-time work in the OECD countries is dominated by women. The proportion of part-time workers who are female ranges from 63.8% in Finland to 90.4% in Luxembourg. These figures are similarly high whether they occur in a country like Spain (78.6%) with a low share of part-time employment or the Netherlands (76.2%) with a high share.

H.C.S.

THE TRIAD ACCOUNTS FOR FOUR-FIFTHS OF GLOBAL FDI OUTFLOWS AND OUTWARD STOCK

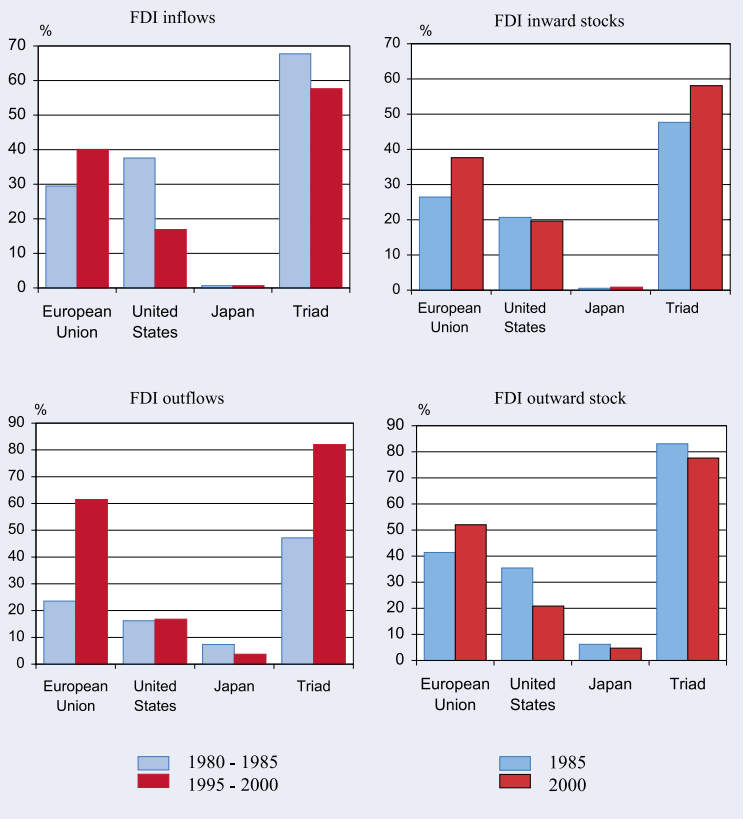
According to the World Investment Report 2001, FDI inflows continued their strong recent growth to reach $1.3 trillion in 2000. The pace was slightly slower, however, than in previous years. In 2001 they are expected to have declined. By all measures (assets, sales, trade and employment of foreign affiliates), FDI rose more rapidly in 1999 and 2000 than gross domestic product (GDP), domestic investment, licensing payments and trade. Interestingly enough, activities of multinational corporations rose rapidly in 1999 (as well as during the preceding three years) when world trade was stagnant, supporting the notion that FDI has become the main force in international economic integration. The ratio of foreign affiliates' sales to global GDP was almost 50 percent, with the sales value being more than twice as high as the value of world exports of goods and services.

The developed countries continued to attract over three quarters of global FDI inflows in 1999/2000. The share of the developing countries in total FDI inflows declined in 1999 by 6 percentage points to 21%; in 2000 it fell yet further to 19%. This was the lowest share since 1990.

The Triad – Japan, the European Union and the United States – has long accounted for the bulk of international production, providing and receiving most of global FDI. During the period 1995 to 2000, the Triad accounted for 58% of global FDI inflows and for 82% of global FDI outflows, and for 48% of FDI inward stock and 78% of FDI outward stock. Compared to 1985, the Triad's share of world FDI inward stock has risen, whereas that of the FDI outward stock has declined. The EU's shares of stocks and flows, inward as well as outward, has increased. Those of the United States and Japan have largely declined, with those of Japan remaining relatively small. The rise in EU shares is largely due to cross-border M&As. The United States remains the single largest host country, but its role as the largest outward investor has been taken over by the United Kingdom and France. The EU as a group continues to be dominant as both investor and recipient. As a result, intra-Triad stocks account for the bulk of the Triad's FDI stocks. Flows between the Triad members are rising, with 40% of total outward FDI stock being located in other Triad members as compared to one-third in 1985.

H.C.S.

THE SHARE OF THE TRIAD IN FDI FLOWS AND STOCKS, 1985 AND 2000



Source: UNCTAD, FDI/TNC database.

RESEARCH REPORTS

WHY DO JOBLESS RATES DIFFER?

STEPHEN NICKELL, LUCA NUNZIATA, WOLFGANG OCHEL AND GLENDA QUINTINI*

The Beveridge Curve plots the relationship between unemployment and job vacancies. Stephen Nickell, Luca Nunziata, Wolfgang Ochel and Glenda Quintini look at the evidence on unemployment and wages in all OECD countries from 1960 to the 1990s and conclude that changes in labour market regimes explain most of the observed shifts.

"The main message transmitted by the Beveridge curves for France and Germany goes squarely against the cliché that high and persistent unemployment is entirely or mainly a matter of worsening functioning of the labour market. It is precisely in France and Germany that there is no sign of a major unfavourable shift of the Beveridge curve during the period of rising unemployment."

R. Solow, 2000, p. 5

"Explanations [of high unemployment] based solely on institutions also run however into a major empirical problem: many of these institutions were already present when unemployment was low. ... Thus, while labour market institutions can potentially explain cross country differences today, they do not appear able to explain the general evolution of unemployment over time."

O. Blanchard and J. Wolfers, 2000, p. C2

"Despite conventional wisdom, high unemployment does not appear to be primarily the result of things like overly generous benefits, trade union power, taxes, or wage 'inflexibility'."

A. Oswald, 1997, p. 1

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This article is an edited version of "The Beveridge Curve, Unemployment and Wages in the OECD from the 1960s to the 1990s", Centre for Economic Performance Discussion Paper No. 502, July 2001.
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It is widely accepted that labour market rigidities are an important part of the explanation for the high levels of unemployment that are still to be found in many OECD countries. However, this view is not universally accepted and there remain serious problems, our starting quotations indicate.

Labour market rigidities cannot explain why European unemployment is so much higher than US unemployment, because the institutions generating these rigidities were much the same in the 1960s as they are today and, in the 1960s, unemployment was much higher in the United States than in Europe. Before going any further, it is worth looking at the actual numbers reported in Table 1.

This confirms that the United States indeed had the highest unemployment in the OECD in the early 1960s, but the picture today is not quite as clear-cut as is commonly thought. In fact, many of the smaller European countries have unemployment rates that are in the same ballpark as the United States, although none has reached the extraordinarily low levels ruling in the early 1960s.

Our aim is to see how far it is possible to defend the proposition that the dramatic long term shifts in unemployment seen in the OECD countries over the period from the 1960s to the 1990s can be explained simply by changes in labour market institutions in the same period. The institutions concerned will be the usual suspects: generous benefits, trade union power, taxes and wage "inflexibility". Our strategy is very straightforward. We analyse shifts in the Beveridge Curve, real wages and unemployment over time and explain these shifts by institutional changes and macroeconomic shocks. We focus on the time series variation in the data and eschew the extensive use of interactions.

Are we successful in our main aim? We feel that we probably deserve a B grade. The story that emerges is reasonably consistent, but not totally decisive. Experts on individual countries would probably feel that we had not produced wholly persuasive

Table 1

Unemployment (Standardised Rate) %

Country	1960–64	1965–72	1973–79	1980–87	1988–95	1996–99	2000	2001
Australia	2.5	1.9	4.6	7.7	8.7	8.7	6.6	6.9
Austria	1.6	1.4	1.4	3.1	3.6	4.3	3.4	3.7
Belgium	2.3	2.3	5.8	11.2	8.4	9.4	7.0	6.9
Canada	5.5	4.7	6.9	9.7	9.5	8.7	6.8	7.0
Denmark	2.2	1.7	4.1	7.0	8.1	5.5	4.7	4.6
Finland	1.4	2.4	4.1	5.1	9.9	12.2	9.8	8.9
France	1.5	2.3	4.3	8.9	10.5	11.9	9.5	8.6
Germany (W)	0.8	0.8	2.9	6.1	5.6	7.1	6.4	6.0
Ireland	5.1	5.3	7.3	13.8	14.7	8.9	4.2	3.8
Italy	3.5	4.2	4.5	6.7	8.1	10.0	9.0	8.4
Japan	1.4	1.3	1.8	2.5	2.5	3.9	4.7	5.0
Netherlands	0.9	1.7	4.7	10.0	7.2	4.7	2.8	2.3
Norway	2.2	1.7	1.8	2.4	5.2	3.9	3.5	–
New Zealand	0.0	0.3	0.7	4.7	8.1	6.8	6.0	–
Portugal	2.3	2.5	5.5	7.8	5.4	5.9	4.2	3.9
Spain	2.4	2.7	4.9	17.6	19.6	19.4	14.1	12.9
Sweden	1.2	1.6	1.6	2.3	5.1	8.7	5.9	5.0
Switzerland	0.2	0.0	0.8	1.8	2.8	3.7	2.6	–
United Kingdom	2.6	3.1	4.8	10.5	8.8	6.9	5.4	5.0
United States	5.5	4.3	6.4	7.6	6.1	4.8	4.0	4.4

Notes: As far as possible, these numbers correspond to the OECD standardised rates and conform to the ILO definition. The exception here is Italy, where we use the US Bureau fo Labor Statistics "unemployment rates on US concepts". With the exception of Italy, these rates are similar to the OECD standardised rates. For earlier years we use the data reported in Layard et al. (1991), Table A3. For later years we use OECD Employment Outlook (2000) and UK Employment Trends, published by the UK Department of Education and Employment.

explanations of the unemployment shifts in each country and we make no attempt to provide a country-by-country story.

Theories of long-term unemployment

There are innumerable detailed theories of unemployment in the long run. These may be divided into two broad groups: those based on flow models and those based on stock models. Fundamentally, all the models have the same broad implications. First, unemployment in the short and in the long run is determined by real demand. Second, over the long term, real demand and unemployment generally tend towards the level consistent with stable inflation. This we term the equilibrium level. Third, the equilibrium level of unemployment is affected both by any variable which influences the ease with which unemployed individuals can be matched to available job vacancies and also by any variable which tends to raise wages in a direct fashion despite excess supply in the labour market. There may be variables common to both sets. Finally, both groups of variables will tend to impact on real wages in the same direction as they influence equilibrium unemployment, because equilibrium labour demand, which is negatively related to wages, has to move in the opposite direction to equilibrium unemployment.

It is worth noting that the first group of variables mentioned above will tend to impact on the position of the Beveridge Curve, whereas the second will not do so in any direct fashion. However, this division is not quite as clear-cut as it might appear at first sight. What we can say, nevertheless, is that any variable that shifts the Beveridge Curve to the right will increase equilibrium unemployment. So a shift of the Beveridge Curve is a sufficient but not necessary sign that equilibrium unemployment has changed.

The unemployment benefit system

We turn now to consider a series of variables that we might expect to influence equilibrium unemployment, either because of their impact on the effectiveness with which the unemployed are matched to available jobs or because of their direct effect on wages. The unemployment benefit system directly affects the readiness of the unemployed to fill vacancies. Important aspects of the system are clearly the level of benefits, their coverage, the length of time for which they are available and the strictness with which the system is operated. Related to unemployment benefits is the availability of other resources to those without jobs. Employment protection laws may tend to make firms more cautious about filling vacancies, which would slow the speed at which the unemployed

move into work. This obviously reduces the efficiency of job matching.

However, the mechanism here is not clear-cut. For example, the introduction of employment laws often leads to an increased professionalisation of the personnel function within firms, as was the case in Britain in the 1970s. This can increase the efficiency of job matching. So, in terms of outflows from unemployment, the impact of employment protection laws can go either way. By contrast, it seems clear that such laws will tend to reduce involuntary separations and hence lower the flows into unemployment. So the overall impact on the Beveridge Curve is an empirical question. Furthermore, employment law may also have a direct impact on pay, since it raises the job security of existing employees, encouraging them to demand higher pay increases.

Anything that makes it easier to match the unemployed to the available vacancies will shift the Beveridge Curve to the left and reduce equilibrium unemployment. Factors which operate in this way include the reduction of barriers to mobility, which may be geographical or occupational. Furthermore, numerous government policies are concerned to increase the ability and willingness of the unemployed to take jobs. These are grouped under the heading of active labour market policies (ALMP).

Wage setting institutions

The obvious place to start is the institutional structure of wage determination. Within every country there is a variety of structures. In some sectors wages are determined more of less competitively, but in others wages are bargained between employers and trade unions at the level of the establishment, firm or even industry. The overall outcome depends on union power in wage bargains, union coverage and the degree of co-ordination of wage bargains. Generally, greater union power and coverage can be expected to exert upward pressure on wages, hence raising equilibrium unemployment, but this can be offset if union wage setting across the economy is co-ordinated.

Superficially, it may be argued that wage setting institutions impact directly on wages without influencing the efficiency of job matching or the separation rate into unemployment: i.e. without influencing the position of the Beveridge Curve. However, if we use a model of the Beveridge Curve that endogenises the rate of separation into unemployment or the rate of job destruction, this no longer applies. For example, if union power raises the share of the matching surplus going to wages, this will tend to raise the rate of job destruction and shift the Beveridge Curve to the right. The same thing will also happen, if factors such as the coordination of wage bargaining reduce the extent to which wages can fluctuate to offset idiosyncratic shocks and stabilise employment at the firm level. So, while coordination can reduce overall wage pressure, which tends to lower equilibrium unemployment, it may raise the rate of idiosyncratic job shifts, which will tend to shift the Beveridge Curve to the right and have an offsetting effect.

Real wage resistance

The final group of variables that directly impacts on wages falls under the heading of real wage resistance. The idea here is that workers attempt to sustain recent rates of real wage growth when the rate consistent with stable employment shifts unexpectedly. For example, if there is an adverse shift in the terms of trade, real consumption wages must fall if employment is not to decline. If workers persist in attempting to bargain for rates of real wage growth, which take no account of the movement in the terms of trade, this will tend to raise unemployment. Exactly the same argument applies if there is an unexpected fall in trend productivity growth (TPG), or an increase in labour taxes. For example, if labour taxes (payroll tax rates plus income tax rates plus consumption tax rates) go up, the real post-tax consumption wage must fall if real labour costs per employee are not to rise. Any resistance to this fall will lead to a rise in unemployment. This argument suggests that increases in real import prices, falls in trend productivity growth, or rises in the labour tax rate may lead to a temporary increase in unemployment.

However, some argue that these effects can be permanent. For example, Mortensen and Pissarides (1999) use their standard flow model of equilibrium unemployment to analyse various economic policies, including changes in payroll taxes. And they find enormous effects. For example, in one simulation, with a benefit replacement ratio of 0.4, a rise in the payroll tax rate from 15 to 25% is enough to raise equilibrium unemployment permanently by

over 6 percentage points. The reason why labour taxes have a big impact in this case is because Mortensen and Pissarides introduce into their model a value of leisure, which is independent of the consumption wage. This fixing of an important element of the individual reservation wage implies that labour supply and willingness to work will increase permanently if the real consumption wage goes up. This will induce permanent reductions in equilibrium unemployment if labour taxes fall or productivity rises. Ultimately this is an empirical question; but it may be argued that, in a satisfactory model, the value of leisure and the individual reservation wage more generally should, in the long run, move proportionally to the consumption wage and the general level of productivity. If this adjustment is made in the Mortensen and Pissarides model, the impact of payroll taxes on equilibrium unemployment disappears.

Table 3

Unemployment Benefit Duration Index 1960–95

Country	1960–64	1965–72	1973–79	1980–87	1988–95
Australia	1.02	1.02	1.02	1.02	1.02
Austria	0	0	0.69	0.75	0.74
Belgium	1.0	0.96	0.78	0.79	0.77
Canada	0.33	0.31	0.20	0.25	0.22
Denmark	0.63	0.66	0.66	0.62	0.84
Finland	0	0.14	0.72	0.61	0.53
France	0.28	0.23	0.19	0.37	0.49
Germany	0.57	0.57	0.61	0.61	0.61
Ireland	0.68	0.78	0.39	0.40	0.39
Italy	0	0	0	0	0.13
Japan	0	0	0	0	0
Netherlands	0.12	0.35	0.53	0.66	0.57
Norway	0	0.07	0.45	0.49	0.50
New Zealand	1.02	1.02	1.02	1.04	1.04
Portugal	–	–	0	0.11	0.35
Spain	0	0	0.01	0.21	0.27
Sweden	0	0	0.04	0.05	0.04
Switzerland	0	0	0	0	0.18
United Kingdom	0.87	0.59	0.54	0.71	0.70
United States	0.12	0.17	0.19	0.17	0.18

Source: OECD. Based on [0.06 (replacement ratio in 2nd and 3rd year of a spell) + 0.04 (replacement ratio in 4th and 5th year of a spell)] ÷ (replacement ratio in 1st year of a spell).

The data

Our purpose is to investigate the effect of changes in labour market "institutions" on the Beveridge Curve, real wages and equilibrium unemployment in the OECD from the 1960s to the 1990s. In order to undertake this task, we require long time series for the appropriate countries. What information do we possess and what are the gaps?

There are four aspects of the unemployment benefit system for which there are good theoretical and empirical reasons to believe that they will influence equilibrium unemployment. These are, in turn: the level of benefits, the duration of entitlement, the coverage of the system and the strictness with which the system is operated. Of these, only the first two are available as time series for the OECD countries. The OECD has collected systematic data on the unemployment benefit replacement ratio for three different family types (single, with dependent spouse, with spouse at work) in three different duration categories (1st year, 2nd and 3rd years, 4th and 5th years) from 1961 to 1995 (every other year). A summary of these data is presented in Tables 2 and 3.

It is unfortunate that we have no comprehensive time series data on the coverage of the system or on the strictness with

Table 2

Unemployment Benefit Replacement Ratios 1960–95

Country	1960–64	1965–72	1973–79	1980–87	1988–95
Australia	0.18	0.15	0.23	0.23	0.26
Austria	0.15	0.17	0.30	0.34	0.34
Belgium	0.37	0.40	0.55	0.50	0.48
Canada	0.39	0.43	0.59	0.57	0.58
Denmark	0.25	0.35	0.55	0.67	0.64
Finland	0.13	0.18	0.29	0.38	0.53
France	0.48	0.51	0.56	0.61	0.58
Germany (W)	0.43	0.41	0.39	0.38	0.37
Ireland	0.21	0.24	0.44	0.50	0.40
Italy	0.09	0.06	0.04	0.02	0.26
Japan	0.36	0.38	0.31	0.29	0.30
Netherlands	0.39	0.64	0.65	0.67	0.70
Norway	0.12	0.13	0.28	0.56	0.62
New Zealand	0.37	0.30	0.27	0.30	0.29
Portugal	–	–	0.17	0.44	0.65
Spain	0.35	0.48	0.62	0.75	0.68
Sweden	0.11	0.16	0.57	0.70	0.72
Switzerland	0.04	0.02	0.21	0.48	0.61
United Kingdom	0.27	0.36	0.34	0.26	0.22
United States	0.22	0.23	0.28	0.30	0.26

Source: OECD. Based on the replacement ratio in the first year of an unemployment spell averaged over three family types. See OECD (1994), Table 8.1 for an example.

Table 4

Collective Bargaining Coverage (%)

Country	1960	1965	1970	1975	1980	1985	1990	1994	1997	1999
Austria	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	99	99	–	–
Belgium	80	80	80	85	90	90	90	90	–	–
Denmark	67	68	68	70	72	74	69	69	–	–
Finland	95	95	95	95	95	95	95	95	–	–
France	n.a.	n.a.	n.a.	n.a.	85	n.a.	92	95	97	–
Germany	90	90	90	90	91	90	90	92	–	–
Ireland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	–	–
Italy	91	90	88	85	85	85	83	82	–	–
Netherlands	100	n.a.	n.a.	n.a.	76	80	n.a.	85	–	–
Norway	65	65	65	65	70	70	70	70	–	–
Portugal	n.a.	n.a.	n.a.	n.a.	70	n.a.	79	71	–	–
Spain	n.a.	n.a.	n.a.	n.a.	68	70	76	78	–	–
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	86	89	–	–
Switzerland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	53	53	–	–
United Kingdom	67	67	68	72	70	64	54	40	36	–
Canada	35	33	36	39	40	39	38	36	–	–
United States	29	27	27	24	21	21	18	17	–	15
Japan	n.a.	n.a.	n.a.	n.a.	28	n.a.	23	21	–	–
Australia	85	85	85	85	85	85	80	80	–	–
New Zealand	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	67	31	–	–

These data were collected by W. Ochel from specific country experts. We are grateful for all their assistance. Further details may be found in Ochel (2001).

which it is administered. This is particularly true for "strictness", because the evidence we possess appears to indicate that this is of crucial importance in determining the extent to which a generous level of benefit will actually influence unemployment. For example, Denmark, which has very generous unemployment benefits, totally reformed the operation of its benefit system through the 1990s with a view to tightening the criteria for benefit receipt and the enforcement of these criteria via a comprehensive system of sanctions. The Danish Ministry of Labour is convinced that this process has played a major role in allowing Danish unemployment to fall dramatically since the early 1990s without generating inflationary pressure.

A further aspect of the structure of the benefit system for which we do not have detailed data back to the 1960s is those policies grouped under the heading of active labour market policies (ALMP). The purpose of these is to provide active assistance to the unemployed to improve their chances of obtaining work. Multi-country studies indicate that ALMPs do reduce unemployment. This broad-brush evidence is backed up by numbers of micro-econometric studies, also showing that, under some circumstances, active labour market policies are effective. In particular, job search assistance tends to have consistently positive outcomes, but other types of measure such as employment subsidies and labour market training must be well designed if they are to have a significant impact.

In most OECD countries, the majority of workers have their wages set by collective bargaining between employers and trade unions at the plant, firm, industry or aggregate level. This is important for our purposes because there is some evidence that trade union power in wage setting has a significant impact on unemployment. Unfortunately, we do not have complete data on collective bargaining coverage (the proportion of employees covered by collective agreements), but the data presented in Table 4 give a reasonable picture. Across most of Continental Europe, including Scandinavia but excluding Switzerland, coverage is both high and stable. This is either because most people belong to trade unions, or because union agreements are extended by law to cover non-members in the same sector. In Switzerland and in the OECD countries outside Continental Europe and Scandinavia, coverage is generally much lower, with the exception of Australia. In the UK, the US and New Zealand coverage has declined with the fall in union density, there being no extension laws in place to compensate.

In Table 5, we present the percentage of employees who are union members. Across most of Scandinavia, membership tends to be high. By contrast, in much of Continental Europe and in Australia, union density tends to be less than 50% and is gradually declining. In these countries there is, consequently, a wide and widening gap between density and coverage, which it is the job of the extension

Table 5

Union Density (%)

Country	1960–64	1965–72	1973–79	1980–87	1988–95	Extension laws in place[a)]
Australia	48	45	49	49	43	✓
Austria	59	57	52	51	45	✓
Belgium	40	42	52	52	52	✓
Canada	27	29	35	37	36	✗
Denmark	60	61	71	79	76	✗
Finland	35	47	66	69	76	✓
France	20	21	21	16	10	✓
Germany (W)	34	32	35	34	31	✓
Ireland	47	51	56	56	51	✗
Italy	25	32	48	45	40	✓
Japan	33	33	30	27	24	✗
Netherlands	41	38	37	30	24	✓
Norway	52	51	52	55	56	✗
New Zealand	36	35	38	37	35	✗
Portugal	61	61	61	57	34	✓
Spain	9	9	9	11	16	✓
Sweden	64	66	76	83	84	✗
Switzerland	35	32	32	29	25	✓[b)]
United Kingdom	44	47	55	53	42	✗
United States	27	26	25	20	16	✗

Notes: (i) Union density = union members as a percentage of employees. In both Spain and Portugal, union membership in the 1960s and 1970s does not have the same implications as elsewhere because there was pervasive government intervention in wage determination during most of this period.
(ii) [a)] Effectively, bargained wages extended to non-union firms typically at the behest of one party to the bargain.
[b)] Extension only at the behest of both parties to a bargain.
See OECD. For details, see OECD (1994), Table 5.11.

laws to fill. This situation is at its most stark in France, which has the lowest union density in the OECD at around 10%, but one of the highest levels of coverage (around 95%). Outside these regions, both density and coverage tend to be relatively low and both are declining at greater or lesser rates. The absence of complete coverage data means that we have to rely on the density variable to capture the impact of unionisation on unemployment. As should be clear, this is only half the story, so we must treat any results we find in this area with some caution.

The other aspect of wage bargaining which appears to have a significant impact on wages and unemployment is the extent to which bargaining is co-ordinated. Roughly speaking, the evidence suggests that, if bargaining is highly co-ordinated, this will completely offset the adverse effects of unionism on employment. Co-ordination refers to mechanisms whereby the aggregate employment implications of wage determination are taken into account when wage bargains are struck. This may be achieved if wage bargaining is highly centralised, as in Austria, or if there are institutions, such as employers' federations, which can assist bargainers to act in concert, even when bargaining itself ostensibly occurs at the level of the firm or industry, as in Germany or Japan.

Table 6

Co-ordination Indices (Range 1–3)

Country	1960–64		1965–72		1973–79		1980–87		1988–95	
	1	2	1	2	1	2	1	2	1	2
Australia	2.25	2	2.25	2	2.25	2.36	2.25	2.31	1.92	1.63
Austria	3	2.5	3	2.5	3	2.5	3	2.5	3	2.42
Belgium	2	2	2	2	2	2.1	2	2.55	2	2
Canada	1	1	1	1	1	1.63	1	1.08	1	1
Denmark	2.5	3	2.5	3	2.5	2.96	2.4	2.54	2.26	2.42
Finland	2.25	1.5	2.25	1.69	2.25	2	2.25	2	2.25	2.38
France	1.75	2	1.75	2	1.75	2	1.84	2	1.98	1.92
Germany (W)	3	2.5	3	2.5	3	2.5	3	2.5	3	2.5
Ireland	2	2	2	2.38	2	2.91	2	2.08	3	2.75
Italy	1.5	1.94	1.5	1.73	1.5	2	1.5	1.81	1.4	1.95
Japan	3	2.5	3	2.5	3	2.5	3	2.5	3	2.5
Netherlands	2	3	2	2.56	2	2	2	2.38	2	3
Norway	2.5	3	2.5	3	2.5	2.96	2.5	2.72	2.5	2.84
New Zealand	1.5	2.5	1.5	2.5	1.5	2.5	1.32	2.32	1	1.25
Portugal	1.75	3	1.75	3	1.75	2.56	1.84	1.58	2	1.88
Spain	2	3	2	3	2	2.64	2	2.3	2	2
Sweden	2.5	3	2.5	3	2.5	3	2.41	2.53	2.15	1.94
Switzerland	2.25	2	2.25	2	2.25	2	2.25	2	2.25	1.63
United Kingdom	1.5	1.56	1.5	1.77	1.5	1.77	1.41	1.08	1.15	1
United States	1	1	1	1	1	1	1	1	1	1

Notes: The first series (1) only moves in response to major changes; the second series (2) attemps to capture all the nuances. Co-ordination 1 was provided by Michèle Belot to whom much thanks (see Belot and van Ours, 2000, for details). Co-ordination 2 is the work of W. Ochel. Co-ordination 1 appears in all the subsequent regressions.

Table 7

Employment Protection (Index, 0–2)

Country	1960–64	1965–72	1973–79	1980–87	1988–95
Australia	0.50	0.50	0.50	0.50	0.50
Austria	0.65	0.65	0.84	1.27	1.30
Belgium	0.72	1.24	1.55	1.55	1.35
Canada	0.30	0.30	0.30	0.30	0.30
Denmark	0.90	0.98	1.10	1.10	0.90
Finland	1.20	1.20	1.20	1.20	1.13
France	0.37	0.68	1.21	1.30	1.41
Germany (W)	0.45	1.05	1.65	1.65	1.52
Ireland	0.02	0.19	0.45	0.50	0.52
Italy	1.92	1.99	2.00	2.00	1.89
Japan	1.40	1.40	1.40	1.40	1.40
Netherlands	1.35	1.35	1.35	1.35	1.28
Norway	1.55	1.55	1.55	1.55	1.46
New Zealand	0.80	0.80	0.80	0.80	0.80
Portugal	0.00	0.43	1.59	1.94	1.93
Spain	2.00	2.00	1.99	1.91	1.74
Sweden	0.00	0.23	1.46	1.80	1.53
Switzerland	0.55	0.55	0.55	0.55	0.55
United Kingdom	0.16	0.21	0.33	0.35	0.35
United States	0.10	0.10	0.10	0.10	0.10

Note: These data are based on an interpolation of the variable used by Blanchard and Wolfers (2000), to whom we are most grateful. This variable is based on the series used by Lazear (1990) and that provided by the OECD for the late 1980s and 1990s. Since the Lazear index and the OECD index are not strictly comparable, the overall series is not completely reliable.

It is worth noting that co-ordination is not, therefore, the same as centralisation, which refers simply to the level at which bargaining takes place (plant, firm, industry or economy-wide). In Table 6, we present co-ordination indices for the OECD from the 1960s. The first index (co-ord 1) basically ignores transient changes, whereas the second (co-ord 2) tries to capture the various detailed nuances of the variations in the institutional structure. Notable changes are the increases in co-ordination in Ireland and the Netherlands towards the end of the period and the declines in co-ordination in Australia, New Zealand and Sweden. Co-ordination also declines in the UK over the same period, but this simply reflects the sharp decline of unionism overall.

Employment protection laws are thought by many to be a key factor in generating labour market inflexibility. Despite this, evidence that they have a decisive impact on overall rates of unemployment is mixed, at best. In Table 7, we present details of an employment protection index for the OECD countries. Features to note are the wide variation in the index across countries and the fact that, in some countries, the basic legislation was not introduced until the 1970s.

In looking for the impact of taxes on employment, the important ones are those that form part of the wedge between the real product wage (labour costs per employee normalised on the output price) and the real consumption wage (after-tax pay normalised on the consumer price index). These are payroll taxes, income taxes and consumption taxes. Their combined impact on unemployment remains a subject of some debate, despite the large number of empirical investigations. Indeed some studies indicate that employment taxes have no long-run impact whatever on unemployment, whereas others present results which imply that they can explain more or less all the rise in unemployment in most countries during the 1960-1985 period. In Table 8 we present the total tax rate on labour for the OECD countries. All countries exhibit a substantial increase over the period from the 1960s to the 1990s, although there are wide vari-

Table 8

Total Taxes on Labour

Payroll Tax Rate plus Income Tax Rate plus Consumption Tax Rate

Total Tax Rate (%)

Country	1960–64	1965–72	1973–79	1980–87	1988–95
Australia	28	31	36	39	–
Austria	47	52	55	58	59
Belgium	38	43	44	46	50
Canada	31	39	41	42	50
Denmark	32	46	53	59	60
Finland	38	46	55	58	64
France	55	57	60	64	67
Germany (W)	42	44	48	50	52
Ireland	23	30	30	37	41
Italy	57	56	54	56	67
Japan	25	25	26	32	33
Netherlands	45	54	57	55	47
Norway	–	52	61	65	61
New Zealand	–	–	29	30	–
Portugal	20	25	26	33	40
Spain	19	23	29	40	46
Sweden	41	54	68	77	78
Switzerland	30	31	35	36	35
United Kingdom	34	43	45	51	47
United States	34	37	42	44	45

Note: These data are based on the Centre for Economic Performance/OECD dataset.

Table 9

Mobility: Owner Occupation (%)

Country	1960–64	1965–72	1973–79	1980–87	1988–95
Australia	64	66	69	71	70
Austria	39	41	45	50	55
Belgium	51	54	57	60	62
Canada	65	61	61	62	61
Denmark	44	48	51	52	51
Finland	57	59	60	63	67
France	42	44	49	52	54
Germany (W)	30	35	38	39	38
Ireland	62	69	74	77	78
Italy	46	49	55	62	67
Japan	69	61	61	62	61
Netherlands	30	34	39	43	44
Norway	53	53	57	59	59
New Zealand	69	68	69	70	71
Portugal	–	–	–	–	–
Spain	54	62	69	75	78
Sweden	36	35	39	41	42
Switzerland	33	29	29	30	30
United Kingdom	43	48	53	60	68
United States	64	65	67	67	64

Note: These numbers are based on data supplied by Andrew Oswald to whom we are most grateful. For most countries, the original data are generated by the Population Census, which takes place relatively infrequently. They are then linearly interpolated.

ations across countries. These mainly reflect the extent to which health, higher education and pensions are publicly provided, along with the all-round generosity of the social security system.

Oswald (1997) proposes that barriers to geographical mobility, as reflected in the rate of owner occupation of the housing stock, also play a key role in determining unemployment. He finds that changes in unemployment are positively correlated with changes in owner occupation rates across countries, US states and UK regions. He also presents UK evidence that owner occupation represents a significant mobility barrier relative to private renting. However, Gregg et al. (2000) find that, while unemployment is significantly negatively related to owner occupation rates both across UK regions and across time, in a regional fixed effects model this relationship becomes significantly positive once other relevant regional characteristics are included. We include owner occupation as a variable in our investigation and the data are shown in Table 9. It must, however, be borne in mind that these data are heavily interpolated, so the results should be treated with caution.

A simple empirical model

In seeking to explain the different patterns of unemployment exhibited across the OECD in the period from the 1960s to the 1990s, our approach is to see how far we can get with a very simple empirical model. We have already discussed those factors that can be expected to influence equilibrium unemployment in the long run. Since we are, in practice, going to explain actual unemployment, we must also include in our model those factors that might explain the short-run deviations of unemployment from its equilibrium level. These factors include aggregate demand shocks, productivity shocks and wage shocks.

Some further specific points are worth noting. The first of these is the role of productivity shocks and real import shocks in capturing real wage resistance. As we have noted, increases in real import prices or falls in trend productivity growth will lead to temporary increases in unemployment (and in real product wages relative to productivity) if real consumption wages do not adjust appropriately. Second, we include the real interest rate because some have accorded it a significant role in the determination of unemployment even in the long run. Third, we are not simply going to look at unemployment, but shall also try to explain real product wages (real labour costs) and shifts in the Beveridge Curve in order to see if we can obtain a consistent picture.

For those who are interested, the details of the equations we have used can be found in Nickell et al. (2001). Here we shall confine ourselves to a summary of our findings.

The findings

Two points stand out. First, for every country except Norway and Sweden, the Beveridge Curve shifted to the right from the 1960s to the mid-1980s. Of course, the distance moved varied from country to country, but the movement is clear in all cases. Second, after the mid-1980s, the countries fall into two groups: those for which the Beveridge Curve carries on moving to the right with no serious hint of a turnaround and those for which it

starts moving back to the left. The first group definitely includes Belgium, Finland, France, Germany, Japan, Norway, Spain, Sweden and Switzerland. (The movement in Belgium, France and Germany is particularly clear in the sense that both vacancies and unemployment were higher in the late 1990s' boom than in the late 1980s' boom and were higher in the late 1980s' boom than in the late 1970s' boom.) The second group definitely includes Canada, Denmark, Netherlands, the UK and the US. Australia, Austria, New Zealand and Portugal are harder to place, although all are probably showing some recent improvement (leftward move).

These reasonably clear-cut movements in the Beveridge Curve provide evidence that some factors of the type discussed have raised equilibrium unemployment in most countries over the period from the 1960s to the mid-1980s and that, from then on, they have caused a fall back in some of these countries and a continuing rise in others.

As an explanation of the inflow rate into unemployment, it is notable that the impact of the owner occupation rate (i.e. mobility barriers) is only weakly positive, whereas that of employment protection is, as expected, negative. Of the variables that directly impact on wage determination, union density turns out to be strongly positive. This is consistent with the role of union power in the Mortensen and Pissarides (1994) model, where unions raise the destruction rate by increasing the share of the matching surplus going to wages.

Combining the Beveridge Curve and inflow rate equation, we found that, once we include the impact of these variables on the inflow rate the duration of benefits, union density and owner occupation all tend to shift the Beveridge Curve to the right, whereas stricter employment protection shifted it to the left. These should translate directly into effects on equilibrium unemployment. However, we should bear in mind that variables such as union density, co-ordination and employment protection may also have a direct effect on wages and hence further effects on equilibrium unemployment. Indeed, we might expect employment protection to impact on unemployment via its direct wage effect in the opposite direction to the Beveridge Curve effects. So our next step is to go directly to the impact of our variables on unemployment and wages.

The idea here is to add to the overall picture by seeing if the impact of the institutions on real wages is consistent with their impact on unemployment. Broadly speaking, the institution variables can influence wages directly by raising the bargaining power of workers, or they can operate by modifying the effect of unemployment on wages. For example, trade unions may reduce the impact of unemployment on wages by insulating the existing work force from the rigours of the external labour market. Either raising wages directly or reducing the (absolute) value of the unemployment coefficient will lead to an increase in equilibrium unemployment. Furthermore, it is worth noting that, in most standard models, institutions which shift the Beveridge Curve will also tend to impact on wages as well as on equilibrium unemployment.

We find co-ordination in wage bargaining increases the absolute impact of unemployment and that both union density and the benefit replacement ratio reduce it. The overall impact of both employment protection and employment taxes is to raise real wages, but these effects are modified in economies where wage bargaining is co-ordinated. Both the benefit replacement ratio and the benefit duration have a direct impact on wages. We also investigated the interaction between the two on the basis that higher benefits will have a bigger effect if duration is longer. This interaction effect was positive, but insignificant. Looking at real wage resistance effects, we find that a TFP shock has a negative effect on real wages (given trend productivity) and an import price shock has a positive effect. Both these are consistent with the real wage resistance story. Finally, we find that the impact of owner occupation on wages is positive and close to significance.

So how well does our model fit the data? Overall, it appears to do quite well, particularly for those countries with big changes in unemployment. However, for countries with minimal changes such as Austria, Japan and Switzerland, it is not great.

How do the institution effects compare with those in the wage equation? First, just as in the wage equation, both employment protection and employment taxes have a positive effect, with the latter being modified in economies with co-ordinated wage bargaining. Our tax effects are not nearly as large as those of Daveri and Tabellini (2000), with a 10 percentage point increase in the

total employment tax rate leading to around a 1 percentage point rise in unemployment in the long run at average levels of co-ordination.

As might have been expected, benefit levels have an important impact on unemployment, as does benefit duration and their interaction, something that did not show up in the wage equation. Furthermore, despite the fact that union density reduces the unemployment effect in the wage equation, we can find no significant effect on unemployment, although we do find a positive rate of change effect. We do find a positive role for owner occupation but, as in the wage equation, it is not very significant. Finally, the impact of the import price and TFP shocks seem sensible and consistent with those in the wage equation. However, while money supply shocks do not have any effect, the real interest rate does have some positive impact.

So it appears that, overall, changing labour market institutions provide a reasonably satisfactory explanation of the broad pattern of unemployment shifts in the OECD countries, and their impact on unemployment is broadly consistent with their impact on real wages. With better data, e.g. on union coverage or the administration of the benefit system, we could probably generate a more complete explanation, in particular one that did not rely on such a high level of endogenous persistence to fit.

In the following countries, changing institutions explain a significant part of the overall change in unemployment since the 1960s: Belgium, Canada, Denmark, Finland, France, Italy, Netherlands, Norway, Spain, UK, and the US. They explain far too much in Austria, Portugal and Sweden. They explain very little in Australia, Germany, Japan, New Zealand and Switzerland, although in Japan and Switzerland there is very little to explain. Again, the outcome is "not bad", given the weaknesses of the data.

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THE SUPPORT OF THE EURO IN THE FIFTEEN EU COUNTRIES – POLITICS AND ECONOMICS*

HERBERT GLEJSER**

This paper aims at examining the contributions to the popularity of the euro in the EU countries as a consequence of the political support to the European cause and the economic need to replace some outdated lilliputian currencies in several countries.

The various degrees of adhesion to the euro in Western, Southern and Northern Europe are generally attributed wrongly only to varying political enthusiasm for Continental integration as between, say, Italy, at one extreme and the U.K. at the other. In fact, the two factors mentioned play a role.

The data

Columns (1) and (2) of Table 1 show the "gross" support of the fifteen member countries of the euro whereas columns (3) and (4) describe the net support i.e. gross support minus opposition: both were obtained in a EU poll taken in the fall of 2000. The nations are ranked similarly according to both variables, the main exception being Belgium which occupies rank 3 for gross and 5 for net as resistance to the euro was repudiated by 24% of the population (72%–48%) – more so than in Italy (17%) and Luxembourg (20%) – but less so than in the Netherlands (31%), Austria (38%), Germany (44%), Finland (49%), Denmark (55%), the U.K. (63%) and Sweden (64%). Notice that the latter countries had a currency with a high purchasing power – the lowest being the Austrian schilling (worth about 0.14 euro) and the highest the pound sterling (worth about 1.60 euros).

We surmise indeed that inclination toward the euro is also influenced by the unsuitability of the pre-2002 currency because of the exaggerated number of zeros required to price even a trivial good or service like a book or a meal in a restaurant with the possibility of a 10^{-1} time or 10^{+1} time error when the purchase is less trivial like buying jewels or a plane. Especially old people – their share in the population goes up all over Europe – should suffer from that "zeroism".

That such a factor matters in the economy is shown by the many monetary reforms with or without a change in the denomination, which have taken place over the last half-century in Latin America, the Middle East, Africa and also in Europe as witnessed by the creation in France of the "new" franc worth 100 "old" francs in 1959. There are, of course, important costs implied by such reforms and this

Table 1
The support of the euro in the EU and its explanatory variables

	Gross euro support		Net euro support		Backing of political unification		Euro rate	
Countries	% (1)	Rank (2)	% (3)	Rank (4)	% (5)	Rank (6)	Absolute value (7)	Rank (8)
Italy	79	1	62	1	62	1	1,936.3	1
Luxembourg	75	2	55	2	54	6	40.3	5
Greece	70	3	49	3	51	8	340.8	2
Ireland	69	5	49	3	49	9	0.788	14
Belgium	72	4	48	5	57	2	40.3	5
Spain	68	6	44	6	56	3	166.4	4
Netherlands	64	7	33	7	56	3	2.20	12
Portugal	57	9	31	8	41	11	200.5	3
France	62	8	30	9	56	3	6.56	10
Austria	53	10	15	10	45	10	13.76	7
Germany	47	11	3	11	53	7	1.96	13
Finland	45	12	– 4	12	38	13	5.95	11
Denmark	41	13	– 14	13	39	12	7.45	8
Sweden	26	14	– 38	14	37	14	9.30	9
U.K.	21	15	– 42	15	37	14	0.60	15

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may explain why Italy, where it has been often mentioned over the last decades, never chose to take the initiative, though the matter was discussed in the high spheres of government and the central bank.

But now the euro offers an invaluable opportunity for some countries: at the same cost, they get a reasonable *and* European numéraire (with no need of conversion for trade and capital transactions inside the zone).

No doubt, the incentive to adopt the euro will be higher for the most "pauperized" currencies: the Italian lira, the Greek drachma, the Portugese escudo, the Spanish peseta and possibly the Belgian-Luxembourg franc.

Table 2

Regression Results

	Gross euro support (1)	Net euro support (2)	Political variable (3)	Monetary variable (euro rate (4)	Constant term (5)
Pearson regression					
$R^2 = 0.63$ $\bar{R}^2 = 0.56$ (1)	–	yes	2.34*** (0.76)	5.49** (2.68)	– 111.0*** (36.6)
$R^2 = 0.67$ $\bar{R}^2 = 0.62$ (2)	yes		1.33*** (0.37)	2.77** (1.32)	– 17.6 (18.0)
Rank regression					
$R^2 = 0.63$ $\bar{R}^2 = 0.56$ (3)	–	yes	0.44* (0.21)	0.44* (0.21)	0.94 (2.26)
$R^2 = 0.57$ $\bar{R}^2 = 0.50$ (4)	yes	–	0.51** (0.20)	0.44** (0.20)	0.38 (2.07)
Rank regression without Ireland					
$R^2 = 0.76$ $\bar{R}^2 = 0.71$ (5)	–	yes	0.54*** (0.15)	0.57*** (0.15)	– 0.85 (1.56)
$R^2 = 0.75$ $\bar{R}^2 = 0.71$ (6)	yes	–	0.48*** (0.15)	0.63*** (0.15)	– 0.81 (1.55)

* Significant at 10% level; ** at 5% level; *** at 1% level; ( ): standard errors.

Columns (5) and (6) of Table 1 are taken as the measurement of EU backing in general, measured as the wish of the population for a reinforcement of the Union: it is an average of answers to 25 questions about the wish to have an EU consensus in several fields – education, health, culture, defense etc. and monetary affairs.[1]

Columns (7) and (8) present the value of the euro expressed in the currencies of the members[2]: the range lies between 0.6 and 1,936 – i.e. a relative range of more than 3,000.

We regressed (1) or (3) on (5) and the logs of column (7), as a range of about 60 for column (1) could not possibly keep pace with the 3,000 of column (7). It is unlikely that the Italian currency would exert an influence approximately 3,000 times that of the British pound sterling.

The findings

The results of the regressions are shown in Table 2.

The first two rows represent the linear-loglinear regressions for both the gross and the net support of the euro. The variable "general backing of the EU" reveals significance at the 1% level whereas the present exchange rate of the euro in the 15 nations is significant at the 5% level.

As we have no theoretical foundation for the relation, we tested these first results by correlating the ranks (Spearman rank coefficients) i.e. we applied O.L.S. to the three variables expressed in ranks. With the variable "net support" both explanatory variables are significant at the 1 0% level (2). With the "gross backing" variable they become significant at the 5% level.

It is somewhat curious that the correlations are generally higher with the gross than with the net variable. This would indicate that the opposition to the euro contains some part of white noise not taken care of by our national explanatory variables.

This could be partly due to one outlier, Ireland, whose support ranking is much higher than is warranted by the values of the explanatory variables – even more so for the net than for the gross variable: one additional point and Ireland would occupy the third slot while occupying the ninth for the first explanatory variable and the fourteenth for

[1] This poll was taken around the same time as the previous one i.e. the Fall of 2000. For both see "Poll no. 54 of Eurobaromètre", published by the EU in April 2001.
[2] As of mid-July 2001 for the UK, Sweden and Finland.

the second. This could be due to the fact that more than one quarter of Ireland's trade is now with the UK and that the Irish may hope to reduce a dependency almost unique in the European Union.[3] Toward that end, what is better than a fixed exchange rate with Europe – and the UK left out? If Ireland is excluded, the coefficients all become significant at the 1% level and the coefficients of determination at 0.75 or more are rather impressive for a cross-section somewhat higher now for the net than for the gross variable.

The regression functions are homogeneous of degree 1.11: an increase by 9 for a country in the ranking of the two explanatory variables brings about a jump of 10 in the depentent variable. The constant term has then to be negative – which is the case here without, however, any significance.

We also notice in Table 2 that the coefficient for the euro variable is higher than for the political variable except in row (3) where there is equality and in row (4) where it is lower.

Conclusion

The net support of the euro is especially high in the first nine countries of Table 1 from Italy to Portugal (61% to 31%). The contribution of politics is strong for eight (from Italy to France); that of exchange rates for six (the four Southern countries and Belgium and Luxembourg).

It may be inferred that the lilliputian exchange rates of the currencies of the four Southern currencies were decisive in adopting the euro. Without them at most 7 in 15 currencies could have been left out. And among the 7, two large countries (Italy and Spain)!

It could thus be that the reckless inflations of the four in the past made them into harbingers of the future. As Saint Augustine put it: Felix culpa.

[3] Only Austria with Germany reaches an even higher figure. While Luxembourg's trade is more balanced.

World Economic Survey

Ifo World Economic Climate brightens

The Ifo World Economic Climate improved in January 2002 and is now at the same level as in July 2001, i.e. before the terrorist attacks in New York and Washington (84.1 after 70.7 in October 2001 84.1 in July 2001 and 117.2 at the peak in this cycle in April 2000; 1995=100). However, it is too early to interpret this improvement as the onset of a worldwide recovery. For such an assertion experience dictates three consecutive, positive survey results. At this stage it cannot be ruled out that as in the early 1990s, an initial improvement of the indicator will be followed by a renewed setback before finally a longer lasting recovery phase starts. Thus, the next two surveys in April and July will be crucial for predicting the timing and the strength of the recovery.

World economy: Rebound of Economic Climate

After having reached an all-time low in October 2001, the overall indicator bounced back in January 2002, reaching exactly the same value as in July of last year, i.e. the last survey before the terrorist attacks in the United States. Despite the recent pick-up, the indicator is still well below its long-term average (see Fig. 1).

The improvement of the world indicator resulted exclusively from more positive expectations; the assessment of the current economic situation stagnated at its low October level. In most countries it is expected that in coming months the recovery in the hard-hit capital expenditure sector will be somewhat more pronounced than in private consumption, which proved to be quite resilient during the past recession.

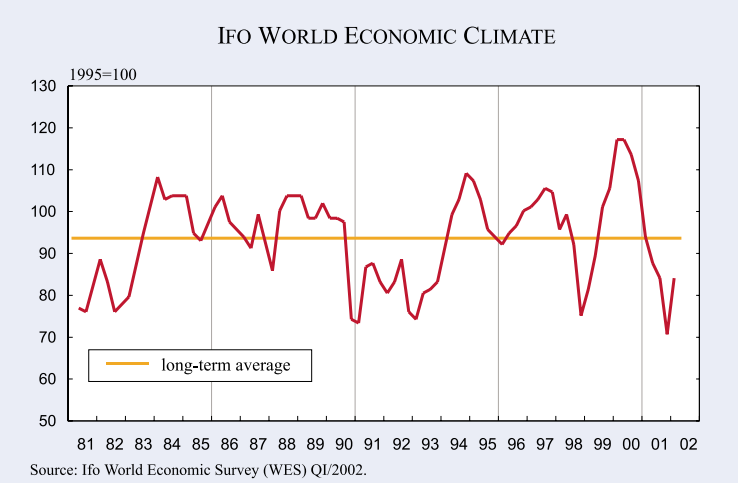
United States: Increasing signs of economic recovery

In contrast to most other countries, the current economic situation in the United States is already showing signs of a recovery, though they are still weak. However, the optimism in the expectations regarding economic developments in the next six months has increased sharply. Thus, the new data support our view that the U.S. economy will pull out first from the cyclical trough. As in most other countries the outlook for capital expenditures improved more than that of private consumption. Exports are expected to pick up in the course of the next six months but less than imports, with the result that the trade balance will deteriorate further. The single most important problem remains insufficient demand followed by unemployment (see Fig. 2).

Western Europe: Cautious hopes for economic recovery in the course of the next six months

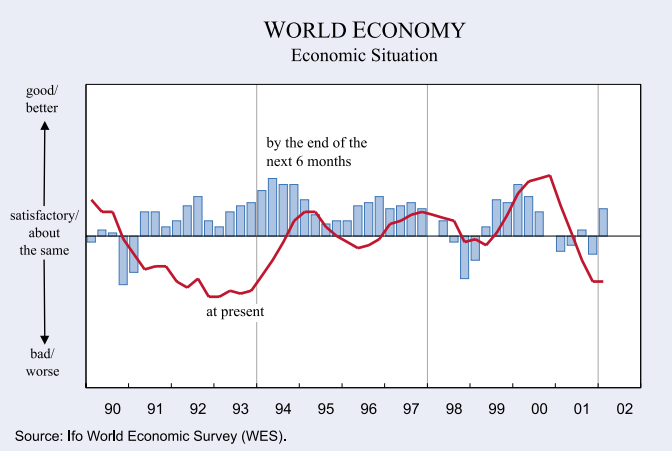
The assessment of the current situation in most Western European economies deteriorated further, with the exception of Denmark, Sweden and the United Kingdom, where some improvements were noted. Germany again received the lowest marks for the current situation, closely followed by Austria, Belgium and Portugal. Although assessments for

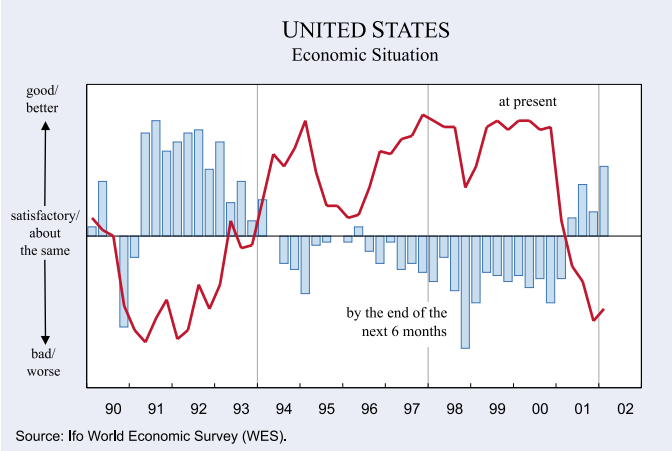
Figure 1

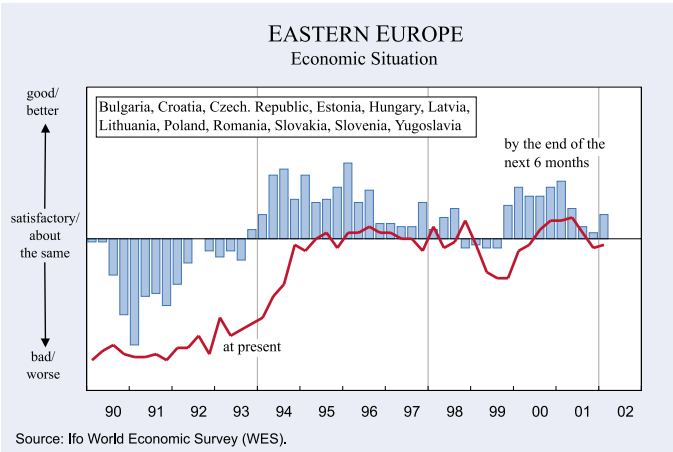


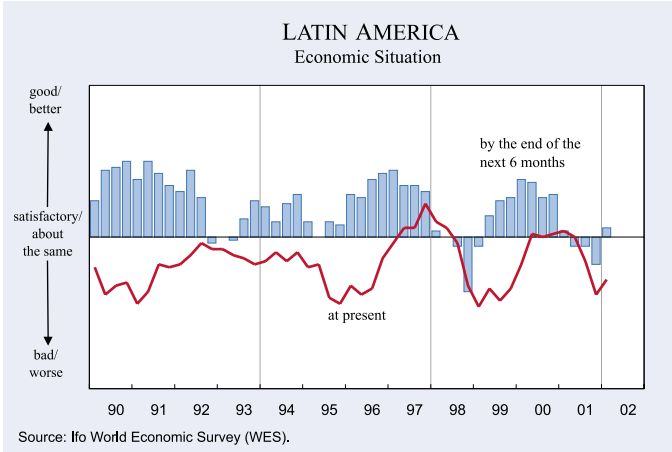
Source: Ifo World Economic Survey (WES) QI/2002.

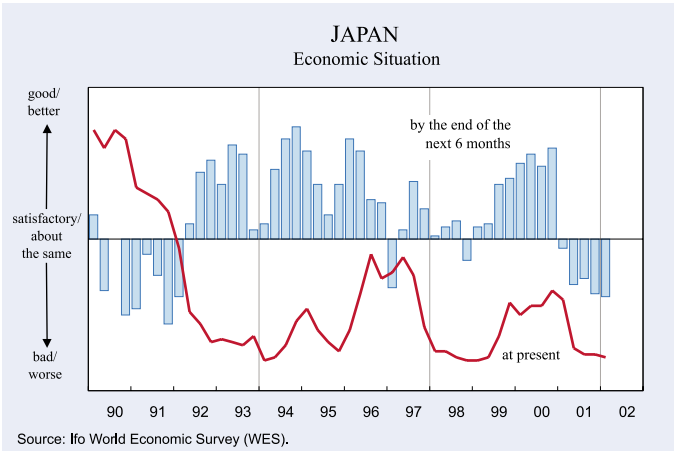
Figure 2

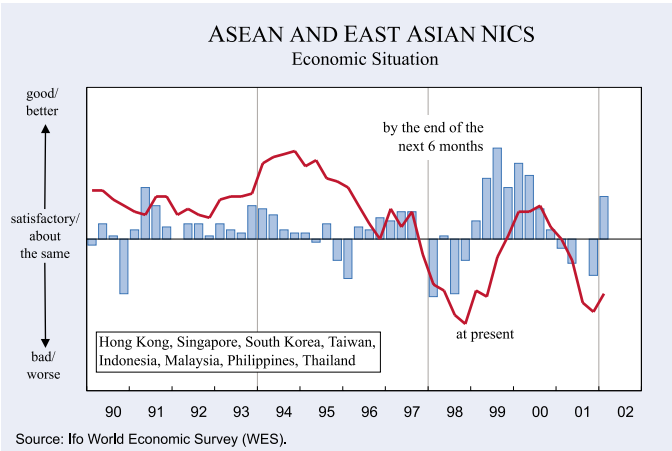

WORLD ECONOMY
Economic Situation
good/ better
satisfactory/ about the same
bad/ worse
by the end of the next 6 months
at present
90 91 92 93 94 95 96 97 98 99 00 01 02
Source: Ifo World Economic Survey (WES).


UNITED STATES
Economic Situation
good/ better
satisfactory/ about the same
bad/ worse
at present
by the end of the next 6 months
90 91 92 93 94 95 96 97 98 99 00 01 02
Source: Ifo World Economic Survey (WES).


EASTERN EUROPE
Economic Situation
good/ better
satisfactory/ about the same
bad/ worse
Bulgaria, Croatia, Czech. Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia, Yugoslavia
by the end of the next 6 months
at present
90 91 92 93 94 95 96 97 98 99 00 01 02
Source: Ifo World Economic Survey (WES).


LATIN AMERICA
Economic Situation
good/ better
satisfactory/ about the same
bad/ worse
by the end of the next 6 months
at present
90 91 92 93 94 95 96 97 98 99 00 01 02
Source: Ifo World Economic Survey (WES).


JAPAN
Economic Situation
good/ better
satisfactory/ about the same
bad/ worse
by the end of the next 6 months
at present
90 91 92 93 94 95 96 97 98 99 00 01 02
Source: Ifo World Economic Survey (WES).


ASEAN AND EAST ASIAN NICS
Economic Situation
good/ better
satisfactory/ about the same
bad/ worse
by the end of the next 6 months
Hong Kong, Singapore, South Korea, Taiwan, Indonesia, Malaysia, Philippines, Thailand
at present
90 91 92 93 94 95 96 97 98 99 00 01 02
Source: Ifo World Economic Survey (WES).

France, Italy and Spain were worse than in the previous survey, at 4.2, 4.4 and 5 points, respectively, their levels were in the middle of the range. The outlook for the next six months improved markedly for Western Europe as a whole and especially for Finland and Germany. Below the European average were economic expectations for the United Kingdom, Ireland and Spain whereas expectations for France and Italy were just about average. The outlook improved particularly for capital expenditures which had suffered strongly during the past twelve months. The list was topped by Norway, followed by Germany, Italy and Greece (see Fig. 3).

Eastern Europe: Economic Climate still relatively robust

The assessments of the current economic situation remained almost unchanged, being still close to the "satisfactory" level. The expectations for the next six months show growing optimism. The current economic situation continues to be more positive than average particularly in Estonia, Hungary, Latvia Slovenia and the Czech Republic. On the other hand, in Bosnia-Herzegovina, Poland, Bulgaria, Croatia and Yugoslavia the current situation is clearly below the "satisfactory" level, though the expectations point more than in the previous survey to some recovery in the course of the next six months.

In Russia, both the current economic situation and the economic outlook for the next six months deteriorated somewhat and slipped now slightly into negative territory. The lower oil price appears to have been mainly responsible for the more sceptical answers. In Kazakhstan, too, the assessment of the current economic situation and the outlook for the next months deteriorated somewhat but still remained quite positive. In contrast, the economic situation is still unsatisfactory in the Ukraine, though less so than in the previous survey; the expectations for the next six months are now seen much more confidently than in past surveys.

Latin America: Better Economic Climate despite economic chaos in Argentina

The signs of economic recovery in the G7 area – particularly in the United States – are showing spill-over effects in Latin America. Brazil, the largest economy in this area, appears to have left the doldrums. The assessment of the current economic situation has emerged from negative territory and expectations for the next six months improved even more, largely due to better export prospects. The economic climate is also relatively positive in Chile. By far the most negative assessments concerning the current economic situation came from Argentina, hit by the currency and banking crisis, followed by Uruguay, Paraguay and Bolivia.

Japan: Still in the doldrums

Although the assessment of the current economic situation is low for Asia as a whole, the assessment for Japan is poorest – aside from Sri Lanka – but bottoming out. Capital expenditures and private consumption are both rated near the bottom. Expectations for the performance of the overall economy by the end of the next six months deteriorated slightly compared to the last survey, but expected capital expenditures improved, albeit to a level which is still dismal and the lowest of all Asian economies. The yen is considered at about the right level against the US dollar and pound Sterling, but overvalued against the euro. Not surprisingly, insufficient demand is held to be the most important problem facing Japan, closely followed by unemployment.

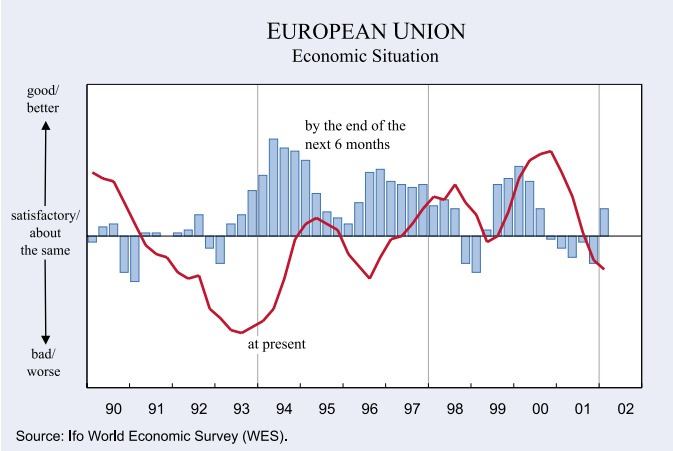
ASEAN and East Asian NICs: Economic Climate recovers from low reached last autumn

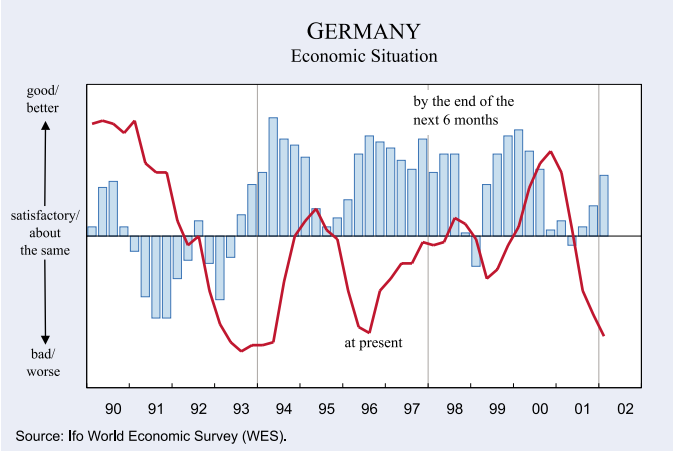
The assessment of the current economic situation of this country group has deteriorated further. The situation is again considered worst for Taiwan, followed by Hong Kong and the Philippines. The economic situation of South Korea, Malaysia and Thailand is considered to have improved, their ratings edging toward the middle of the scale. Expectations for the economic situation by the end of the next six months have improved sharply, however, giving hope for a cyclical turnaround, especially in Taiwan and the Philippines.

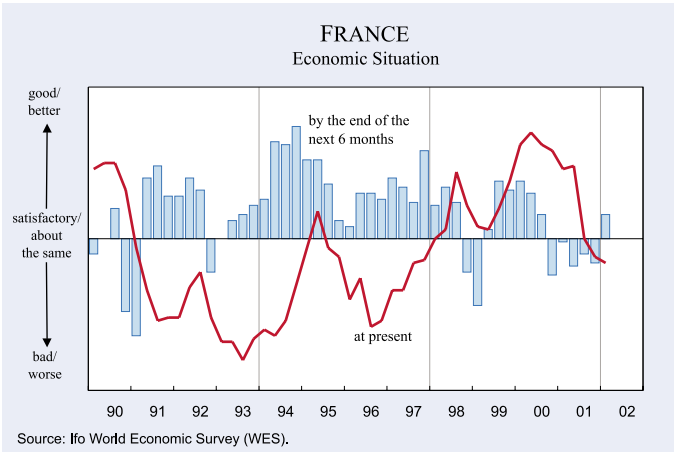
Interest Rates: Not much scope left for further cuts

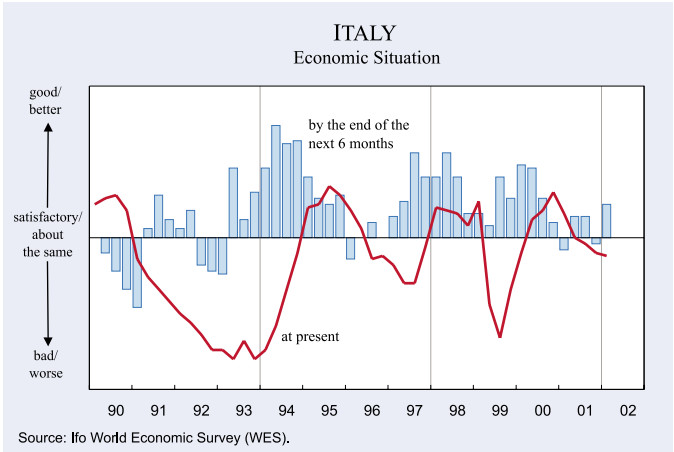
Significantly fewer experts than in the previous survey expect the downward trend of short-term

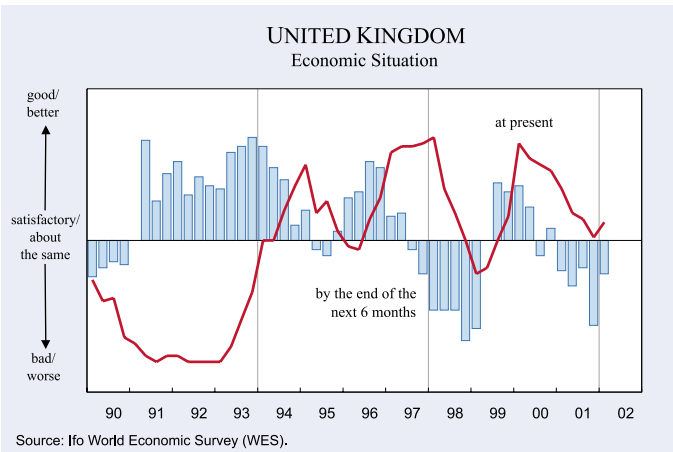
Figure 3


EUROPEAN UNION
Economic Situation
good/ better
satisfactory/ about the same
bad/ worse
by the end of the next 6 months
at present
90 91 92 93 94 95 96 97 98 99 00 01 02
Source: Ifo World Economic Survey (WES).


GERMANY
Economic Situation
good/ better
satisfactory/ about the same
bad/ worse
by the end of the next 6 months
at present
90 91 92 93 94 95 96 97 98 99 00 01 02
Source: Ifo World Economic Survey (WES).


FRANCE
Economic Situation
good/ better
satisfactory/ about the same
bad/ worse
by the end of the next 6 months
at present
90 91 92 93 94 95 96 97 98 99 00 01 02
Source: Ifo World Economic Survey (WES).


ITALY
Economic Situation
good/ better
satisfactory/ about the same
bad/ worse
by the end of the next 6 months
at present
90 91 92 93 94 95 96 97 98 99 00 01 02
Source: Ifo World Economic Survey (WES).


UNITED KINGDOM
Economic Situation
good/ better
satisfactory/ about the same
bad/ worse
at present
by the end of the next 6 months
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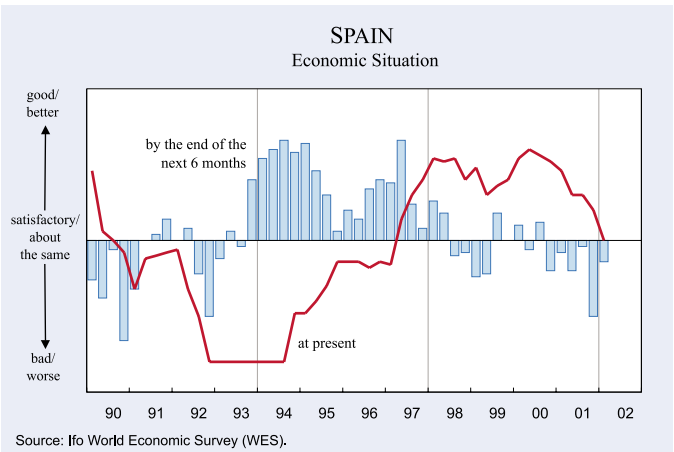
Source: Ifo World Economic Survey (WES).


SPAIN
Economic Situation
good/ better
satisfactory/ about the same
bad/ worse
by the end of the next 6 months
at present
90 91 92 93 94 95 96 97 98 99 00 01 02
Source: Ifo World Economic Survey (WES).

interest rates to continue in the coming months. A spectacular swing from expected rate cuts to possible rate hikes can be observed in the United Kingdom, in Taiwan and in New Zealand. In the United States, where after 11 cuts short-term rates have reached low levels (1.75%), a stable development is expected in the course of the next six months. On the other hand, in Latin America expectations switched from an increase of short-term interest rates to a decrease; this swing is particularly pronounced in Brazil. In Venezuela, Costa Rica and Uruguay the trend of short-term interest rates will remain upward, however. Further cuts of short-term rates are particularly expected in Eastern Europe and to a lesser degree in the Euro area.

With regard to the long-term interest rates, a stabilisation or even a slight increase is expected in the course of the next six months. Thus, the downward trend which started in early in 2000 appears to have come to an end. Long-term interest rates are expected to increase in the next six months particularly in the United Kingdom, Canada, the United States, Australia, Venezuela, Taiwan and also Japan, though here from a very low level.

Inflation: Slowdown in coming months

On a world-wide scale consumer price inflation in 2002 is now seen to be 3.2% compared with 3.6% in the previous year. In the Euro area the inflation rate is expected to reach 2.1% in 2002 after 2.8% in the previous year. Similar figures prevail for the United States. Here a reduction of the inflation rate from 2.8% in 2001 to 2.2% this year appears likely. Asia will again show the highest degree of price stability (1.5% after 1.6% in 2001), influenced heavily by deflationary trends in Japan and Hong Kong (in both cases consumer prices will decline again by almost 1%) and continuing low inflation in China (1.3% after 1.6% last year). But also in other parts of the world a downward trend of inflation – though from a higher level – is expected, e.g. in Eastern Europe from 8.9% last year to 6.7% this year and from in the Near East 17.6% to presumably 12.2% this year. Exceptions from the falling inflation trend are Latin America, and here particularly Argentina and to a lesser degree Venezuela and Uruguay. The increasing price trend in Africa is widespread, though particularly pronounced in Zimbabwe where inflation is expected to surpass the 100% threshold this year.

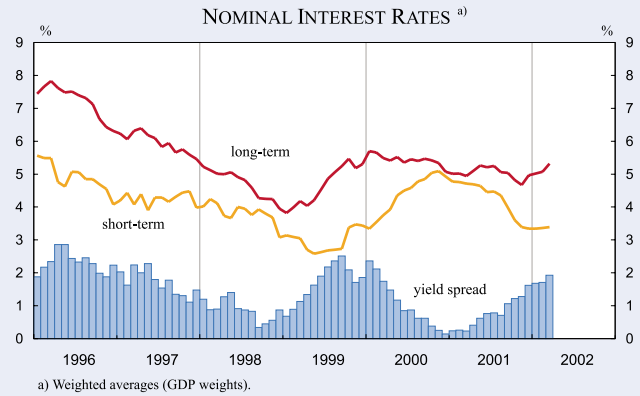
Euro: Still regarded as undervalued

The euro was still seen as undervalued against practically all currencies, though again somewhat less strongly than in the previous surveys. Conversely, the US dollar and the British pound continue to appear overvalued according to the majority of experts polled. After marked devaluations in recent months, the Japanese yen is now close to an appropriate level according to the majority of the WES experts. Particularly in the Euro area and in Oceania (Australia and New Zealand), a decline of the value of the dollar appears likely, though this expectation was in both cases even more pronounced in the previous survey. On the other hand, in Asia as well as in Eastern Europe and even more pronounced in Latin America and Africa the dollar is expected to strengthen further in the course of the next six months.

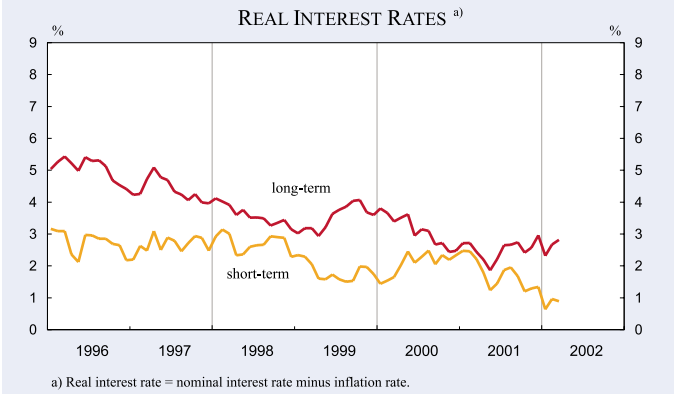
Economic Problems: Unemployment and insufficient demand maintain their top position

The ranking of economic problems remained widely unchanged with unemployment and insufficient demand still seen as the currently most urgent economic problems in most regions of the world. Changes worth mentioning are in the United States the growing importance of public deficits (rank 4 after rank 10 in the previous survey) and of lack of confidence in government´s economic policy (rank 3 after rank 6). In Africa higher public deficits (rank 4 after rank 6) and increasing inflation (rank 6 after rank 8) are starting to cause growing concern among the WES correspondents. Apart from these changes, there remained striking differences: In CIS countries the lack of international competitiveness still tops the list of problems, whereas in Eastern Europe this rank is occupied by public deficits and in Oceania (particularly Australia) by trade barriers to exports.

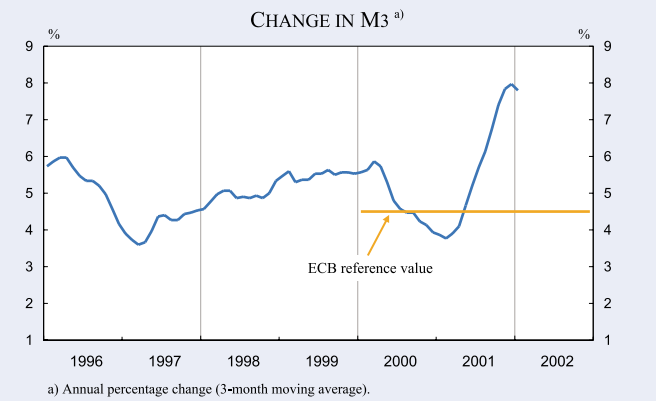
Monetary Conditions in the Euro-Area



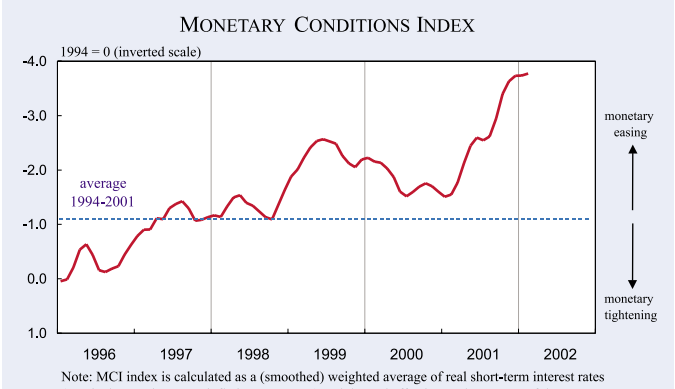
Long-term nominal bond yields rose by 25 basis points in March, continuing the development that has taken place since late 2001. Between November 2001, when government bond yields started to rise, and March the average ten-year government bond yield rose by 65 basis points. Short-term rates remained roughly stable after the turn of the year. As a result, the yield spread approached 2 percentage points.



Adjusted for the rate of inflation which had risen from 2% in December 2001 to 2.7% in January of this year, but then abated to 2.5% in March, long-term real yields increased from their January low, whereas short-term real interest rates declined in March.



M3 growth moderated in February. The annual rate declined to 7.4% from 7.9% in January. As a result, the three-month average of the annual growth rates of M3 declined from 8% in the period from November 2001 to January 2002 to 7.8% in the period from December 2001 to February 2002.

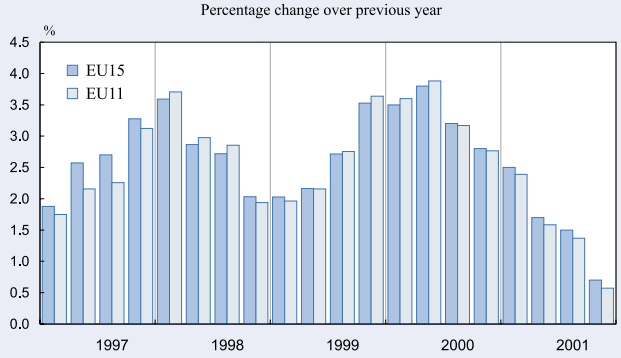


The monetary conditions index which is based on real short-term interest rates (which declined most recently) and the real effective exchange rate of the euro (which has been rather stable) has been largely flat this year. This followed the steep increase of 2001. Thus monetary easing is continuing, though no longer accelerating.

EU Survey Results

Gross Domestic Product in Constant 1995 Prices

Percentage change over previous year



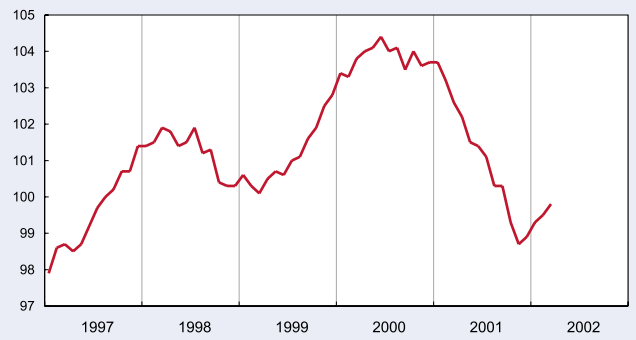
Source: Eurostat.

According to the latest estimates of Eurostat, real GDP growth in the fourth quarter of 2001 declined by 0.2% in the euro area and by 0.1% in the EU15 group of countries. The only positive growth rates were achieved by Sweden (0.3%), Denmark and Spain (0.2% each).The overall decline was due to decreased investment (-0.7% and -0.5% respectively) and exports (-0.6% and -0.9% respectively). In the previous quarter GDP growth had been positive, at 0.2% in both areas.

On a year-on-year basis, GDP grew by 0.6% in the euro area and by 0.7% in the EU15 group, following growth of 1.4% and 1.5%, respectively in the previous quarter. For the entire year 2001 this implies growth of real GDP of 1.5% in the euro area and 1.6% in EU15.

EU Economic Sentiment Indicator

Index 1995 = 100, seasonally adjusted

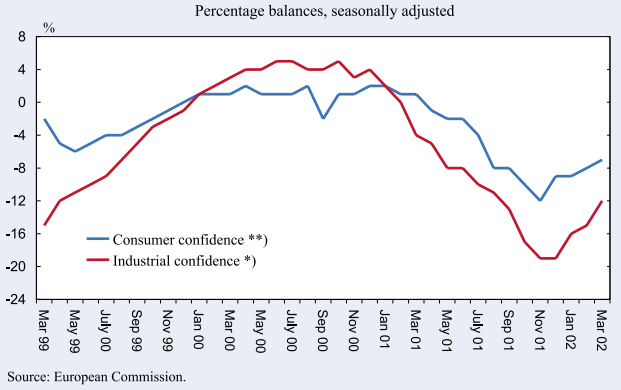


Source: European Commission.

The economic sentiment indicator went up again in March. It increased by 0.3 and 0.2 percentage points in the EU and the euro area, respectively. The economic sentiment indicator in the EU is now only half a percentage point lower than the level reached in August 2001. It had reached its low point in November of last year. The increase was highest in Belgium (0.8 percentage points), Germany (0.7), Portugal (0.5) and Finland (0.5). The indicator remained stable in Denmark and decreased in Austria (– 0.4), Spain (– 0.3), the Netherlands (– 0.2) and Italy (– 0.1).

EU Industrial and Consumer Confidence Indicators

Percentage balances, seasonally adjusted



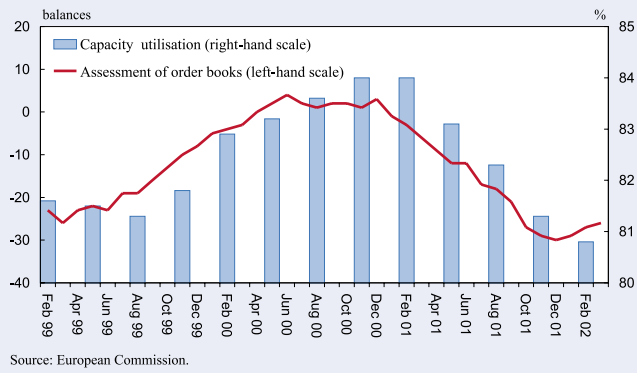
Source: European Commission.

* The industrial confidence indicator is an average of responses (balances) to the questions on production expectations, order-books and stocks (the latter with inverted sign).
** New consumer confidence indicators, calculated as an arithmetic average of the following questions: financial and general economic situation (over the next 12 months), unemployment expectations (over the next 12 months) and savings (over the next 12 months). Seasonally adjusted data.

The **industrial confidence** indicator increased by 3 percentage points in both the EU and the euro area. Industrialists' confidence fell in only three Member States (Greece, Luxembourg and Austria), but rose in nine. In Belgium, Germany, France, Italy and Finland the indicator recorded a rise of 4 percentage points or more. A significant improvement in production expectations lay behind such positive developments.

Changes in the **consumer confidence** indicator were positive for the EU. Aggregate figures conceal large differences across Member States. Consumer confidence increased in Belgium, Germany and France, but declined in, for instance, Spain and Italy, remaining unchanged in the UK.

EU Capacity Utilisation and Order Books in the Manufacturing Industry



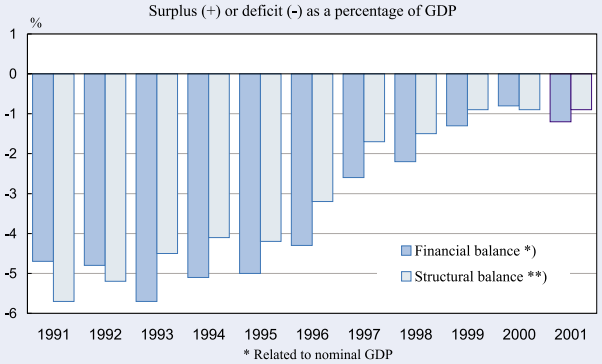
Source: European Commission.

The quarterly report on capacity utilisation showed a further decline. It had peaked exactly a year ago. Assessments of order books in the EU manufacturing industry continued its slow improvement from the depths recorded last December (– 30). They deteriorated markedly, however, in Spain, Luxembourg and Austria. The worst assessments were given in Luxembourg, Austria, Germany and the UK., although in Germany this was an improvement and in the UK no change from the previous month.

EURO AREA INDICATORS

GENERAL GOVERNMENT FISCAL BALANCES

Surplus (+) or deficit (-) as a percentage of GDP

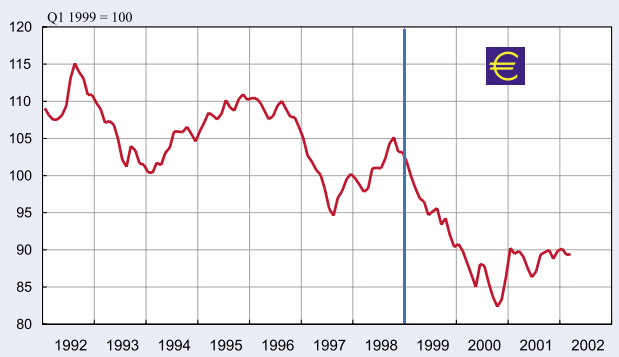


* Related to nominal GDP
** Related to potential GDP.

Sources: Eurostat, OECD.

Compared to the year 2000, when the aggregate government deficit of the EU reached an all-time low at 0.8% of nominal GDP, the deficit - as estimated by the OECD - rose again to 1.2% of GDP. Because of slower economic growth in 2002, the deficit is likely to be still higher this year. The structural balance (adjusted for cyclical effects and related to potential GDP) is estimated to have remained unchanged in 2001, at 0.9%.

REAL EFFECTIVE EXCHANGE RATE OF THE EURO [a)]



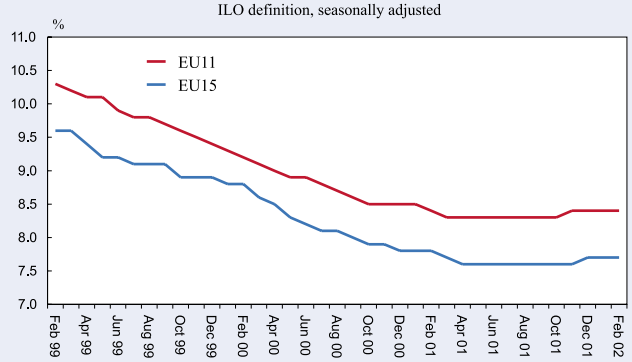
Source: European Central Bank.

a) BIS calculations; to December 1998, based on weighted averages of the euro area countries' effective exchange rates; from January 1999, based on weighted averages of bilateral euro exchange rates. Weights are based on 1990 manufactured goods trade with the trading partners United States, Japan, Switzerland, United Kingdom, Sweden, Denmark, Greece, Norway, Canada, Australia, Hong Kong, South Korea and Singapore and capture third market effects. Real rates are calculated using national CPIs. Where CPI data are not yet available, estimates are used.

Whereas the nominal effective exchange rate of the euro has fluctuated around 87 cents during recent months, the real effective exchange rate has stabilised at 89 to 90 cents since the middle of last year. The turnaround from the all-time low of 82.4 cents in October 2000 has been rather halting, with 90 cents having presented a true upper limit to date.

UNEMPLOYMENT RATE

ILO definition, seasonally adjusted

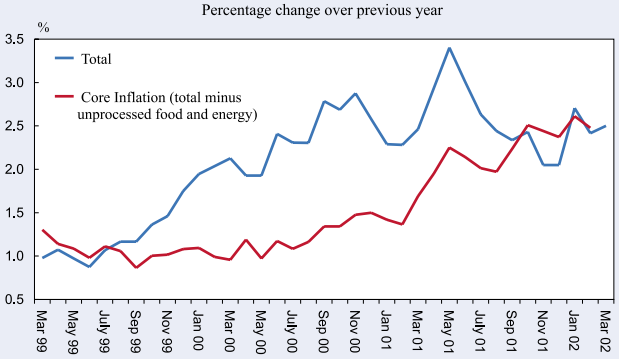


Source: Eurostat.

In February 2002, the standardised rate of unemployment for the euro area remained at 8.4% of the labour force, unchanged since November 2001. The number of unemployed remained roughly constant month-on-month. However, it increased year-on-year (by around 90,000) for the second consecutive month. January's rise had been the first since November 1997. In March, employment expectations derived from surveys continued to improve slightly in manufacturing and services, but deteriorated in construction. The unemployment rate for the entire EU held steady at 7.7%, thus maintaining the difference of 0.7 percentage points effective since March 2001.

INFLATION RATE (HICP)

Percentage change over previous year



Source: Eurostat, Ifo Institute.

The year-on-year rate of HICP inflation in the euro area, which had declined to 2.4% in February from 2.7% in January, rose to 2.5% in March, owing to recent increases in the price of oil on world markets. Core inflation (excluding unprocessed food and energy), which had also declined in February to 2.5% from 2.6% in January, is not yet available for March, but is likely to have remained broadly unchanged.

Overall, price developments in the first few months of 2002 were mainly influenced by a number of specific factors resulting in some erratic movements. Inflation is expected to fall below 2% in the months to come owing mainly to strong base effects stemming from developments in food and energy prices last year.

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Venice Summer Institute 2002	13–20 July 2002	Venice
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Health and Economic Policy	27–28 June 2003	Munich