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Is the European economy a patient, and the Union its doctor?

On jobs and growth in Europe

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Abstract in English

A stronger focus on jobs and growth is part of an effort to renew the Lisbon strategy. This will not automatically and immediately contribute to social cohesion and the environment. For example, higher productivity is not likely to add to the financial sustainability of the public sector.

Looking back, employment (jobs) keeps expanding in the European Union whereas the productivity growth rate is falling. The latter is not easily explained by (falling) investment in knowledge. Instead, the current relatively low productivity growth rate largely reflects success in the past: many European countries have caught up with the United States and have seen relatively fast employment growth in the late nineties. Looking forward, we argue that the combination of the Open Method of Coordination (OMC) with National Action Plans, the way Europe wants to achieve its goals, is both too little and too much: European interference with national employment polices has a weak basis, whereas OMC may not provide the member states with strong enough commitment to pursue an innovation agenda.

Key words:
Jobs and growth, Lisbon agenda, productivity slowdown, Open Method of Coordination
JEL code:
E20, E61, F42, O52

Abstract in Dutch

Een sterkere nadruk op banen en groei moet een nieuwe impuls geven aan de Lissabon-strategie. Dit zal echter niet direct bijdragen aan sociale gelijkheid en het milieu. Het is bijvoorbeeld onwaarschijnlijk dat hogere productiviteitsgroei zal bijdragen aan de financiële houdbaarheid van de sociale voorzieningen.

Terugkijkend is de werkgelegenheid in de Europese Unie toegenomen, terwijl de productiviteitsgroei afneemt. Het laatste kan niet direct verklaard worden uit (dalende) investeringen in kennis. De huidige, relatief lage, productiviteitsgroei is de keerzijde van twee successen in het verleden: veel Europese landen hebben hun achterstand op de Verenigde Staten in productiviteit ingelopen door tijdelijk hogere groei, én de werkgelegenheidsgroei is erg hoog geweest in de tweede helft van de jaren negentig.

Voor de toekomst heeft de combinatie van de Open Methode van Coördinatie (OMC) met Nationale Actie Plannen Europa te veel en te weinig te bieden: de empirische grond voor Europese inmenging in nationaal werkgelegenheidsbeleid is zwak, terwijl de OMC te weinig mogelijkheden biedt om tot een gemeenschappelijk innovatiebeleid te komen.

Steekwoorden:
Banen en groei, Lissabon-agenda, productiviteitsgroei, Open Methode van Coördinatie

Een uitgebreide Nederlandse samenvatting is beschikbaar via www.cpb.nl.

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Preface

The economic ambition of the European Union is summarised in the Lisbon agenda: Europe should improve its competitiveness without harming social cohesion and the environment. In the upsurge of Lisbon's mid-term review, Barroso, President of the European Commission, has recently focused the agenda on jobs and growth, as he identifies, following Kok and Sapir in recent reports, the economy as Europe's sick child. This study reviews the recent performance of European economies with a focus on their productivity growth.

The European Commission has little legal power to enforce reforms necessary to reach its economic ambitions. Much depends on the willingness of member states to carry out policy changes. The collaboration of the Commission and the member states is organised via the Open Method of Coordination (OMC). In the areas of jobs and growth, Kok and Barroso conclude, the OMC has not yet delivered. This study investigates whether the OMC, including the recently proposed National Action Plans, is sufficiently equipped for its tasks.

Special thanks goes to the Minister of European Affairs Atzo Nicolai and the Ministry of Foreign Affairs' Forward Strategy Unit, in particular Jeroen Slaats, who have initiated and supported this project. They have raised the question about CPB's view on the midterm review of the Lisbon agenda, and they have arranged several meetings of the sounding board. Stephan Raes (Economic Affairs), Jos Kester (Ministry of Social Affairs), Aino Jansen and Hans Peter van der Woude (Ministry of Foreign Affairs), Bart van Riel and Ton van der Wijst (SER), Willem Kooi and Mark Roscam (Ministry of Finance), Hans Reiff and Andre de Moor (Ministry of Education, Culture and Science) and Kees Vijverberg (Ministry of Housing, Spatial Planning and the Environment) participated in this sounding board. Their ideas, suggestions and comments have been very valuable. Though the spillovers from these comments have been substantial, the subsidiary principle nevertheless implies that the full responsibility of this study remains with the CPB. Knowledge spillovers are often strong, when researchers are proximate. As such, the study has benefited from useful discussion and comments from within the CPB by Erik Canton, George Gelauff, Henri de Groot, Rob Luginbuhl, Bert Smid, Michel Toet, Paul Veenendaal, Dinand Webbink and Henry van der Wiel.

Henk Don
Director CPB

Summary

Looking back at the first half of the Lisbon strategy, it has been difficult to improve simultaneously the central elements of the strategy: the economy, social cohesion and the environment. Barroso has drawn the conclusion that Europe has to focus on its 'sick child', namely on the economy. In his view, 'growth and jobs' are essential for improving social cohesion and the environment.

That economic expansion contributes to maintaining social cohesion as well as the environment, is a somewhat optimistic view. First, there are structural trade-offs among the central elements of the Lisbon strategy. Escaping these trade-offs temporarily is sometimes possible but requires policy changes (like pricing pollution). Second, higher productivity (growth) may not structurally provide more room for governments to manoeuvre. It leads to higher tax receipts but also to higher public expenditures since public sector wages and social security benefits are linked to productivity. In contrast, more employment (jobs) is associated with a smaller government. But to engineer the increase in employment changes in welfare state arrangements are needed. In other words, focussing solely on the sick child will probably harm the other children.

How sick is the European economy really? In the last fifteen years participation on European labour markets has increased. Currently, labour productivity per hour is high in many European countries. It is perhaps troubling that the rate of productivity growth has fallen since the seventies and especially in the late nineties. The slowdown in productivity growth does not reflect a falling rate of investment in knowledge. Instead, the slowdown is explained by two European successes. First, the poor productivity growth in the late nineties reflects strong employment growth in that period. Second, the slowdown reflects high growth in the past: in the sixties and seventies the European countries have had 'the advantage of backwardness', i.e. the potential to increase productivity by imitating and implementing state-of-the-art technologies. Approaching the technology frontier, however, limits the relatively easy opportunities for technological progress.

At the same time that the European economies saw a sharp decline in productivity growth, the American economy showed an acceleration in productivity growth, mainly prompted by the intensified use of ICT in services. The American acceleration does not make the European countries worse off, but shows a potential for increasing productivity growth. Some European countries like Finland and Sweden have already taken advantage of this potential. Whether other European countries will also take advantage in the near future, is an open question.
The slowdown does not show a clear relation with investment in knowledge and technology, but to reverse it, more investment is needed. Higher investments in research and development, in education and possibly in ICT are likely to contribute to higher productivity growth in the medium run.

Is the European Union really a doctor? With the Lisbon strategy, a new mode of governance has been introduced: the Open Method of Coordination (OMC) aims at coordinating national policies by setting common targets, while accepting national sovereignty in policy design. In their review of the Lisbon strategy, Kok and Barroso lay the blame for the slow progress partly, if not fully, with the member states: they have not delivered. New proposals aim to increase the pressure on the member states to implement policies that stimulate growth and to pursue reforms that create jobs. These proposals will not put the mind at ease of those that find the powers of the Union already excessive. They do not view the Union as part of the solution but as part of the problem.

So, there are two antagonistic views on the role of the European Union. And one could argue that both views are correct. To argue this, one should apply the principle of subsidiarity: competences remain with the member states unless there are good reasons for coordination. A cross-border externality is the most common of these reasons. How does the subsidiarity principle work out for the two central elements in the renewed Lisbon strategy: jobs and growth?

Consider jobs. There is hardly any evidence of international spillovers from employment. The European labour markets hardly depend on each other, and barely affect production in other countries. This forms a rather weak basis for European employment targets and peer pressure on member states to engineer employment growth. The main value added of the OMC is that it stimulates policy learning in areas where coordination is unnecessary. However, even the potential to learn from each other should not be overestimated as the European member states differ markedly in their institutional design.

Consider growth. Productivity growth in one country does spillover to other countries, either by adding to knowledge and technology or through lower import prices. With this spillover, a classical problem of underinvestment arises: without coordination, countries do not internalise the benefits of their investments for other countries. This forms a relatively strong basis for European coordination in some form. Coordination is only successful if the member states are committed to the European goals. The past five years have shown that the OMC has not been able to deliver this. It does not have strong, formal sanctions and the informal pressure has not been enough to introduce effective policies to increase productivity growth, for example by raising R&D expenditures.

A National Action Programme and Mr or Ms Lisbon should make the sanctions stronger and the OMC more effective. For jobs, the need for stronger sanctions is not clear, however. For growth, a more effective OMC seems welcome. However, it is far from obvious that the renewed strategy will be able to deliver commitment. Either the targets are likely to become less ambitious when the political consequences of not reaching national targets become stronger, or the targets may remain overly ambitious and, thus, hardly credible. So, for growth the OMC may not be effective enough.

1 A focus on growth and jobs

Much cited is the phrase ‘to become the most competitive, knowledge-based and dynamic economy in the world’. It summarises the Lisbon declaration of government leaders, drafted some five years ago. According to the declaration, the European Union and its member states should improve economic performance, without deteriorating the environment or damaging social cohesion. A wide variety of actions and targets has been proposed at the same time to achieve this, and together they form the Lisbon strategy.

One immediate success has been to put economic performance, on the top of the policy agenda in Europe. Quite a few observers find the Lisbon strategy overambitious and/or ineffective, but do not seem to disagree that reforms of various markets and government policies have the potential of boosting European economic performance considerably. The fear is even that without reforms Europe will fall behind.

Changing just one or two aspects of economic life in Europe did not seem enough to become the most dynamic economy. Therefore, the Lisbon strategy covered many aspects of economic life; it ranged from increasing participation to 70% of the potential labour force to completing the internal market for services and from raising R&D expenditure to 3% of gross domestic product to reducing the administrative burden on companies. The Lisbon strategy was worked out in detail. The broad aim of increasing overall participation on the European labour markets was supplemented with explicit targets for participation rates of females and workers older than 55. Similarly, the aim to improve education was translated into targets for early school leavers, graduates in mathematics, science and technology, literacy for 15-year old, and so on.

In short, Lisbon aimed to improve economic performance in Europe but not at any cost. Europe was looking for own ways to increase employment and raise productivity. It was not only concerned with improving economic performance, but was also eager to maintain non-economic qualities of life: economic performance should not harm the environment or break up social cohesion.

Five years after its start, the Lisbon strategy has not brought a clear change in the relative position of Europe in the world economy. Even after the collapse of the internet bubble and during an economic recession, productivity growth in the United States has remained impressive, i.e. higher than in the European Union. Lisbon has not delivered, Barroso concludes.

Kok and others (2004) have reviewed the Lisbon strategy and put forward several proposals to rejuvenate it. Building on this review, Barroso has recently clarified the position of the new European Commission. Both Kok and Barroso seek to renew the Lisbon strategy in two ways. The first way is to give the Lisbon strategy a clearer focus: growth and jobs must take centre stage. The stronger emphasis on the economy seems to imply less emphasis on the environment

and on social cohesion. But Barroso and Kok see growth and jobs as essential for achieving sustainable development and for financing the European welfare states in the future. Clearly, this seems to be an important change in view between 2000 and 2005. Whereas in the Lisbon declaration economic growth is made conditional on social cohesion and the environment, Barroso as well as Kok seem to put forward the view that one cannot go without the other. This raises the question whether there is a trade-off or not. In the next section 1.1 an answer to that is formulated.

The priority for jobs and growth is also seen to reflect the urgency of problems in the European economies. Specifically, Barroso argues: “I have three children: the economy, our social agenda, and the environment. Like any modern father, if one of my children is sick, I'm ready to drop everything and focus on him until he is back to health. But that does not mean I love the others any less."[1] Barroso is a modern father but perhaps also another overwrought parent. The Europeans economies are among the well-off in the world, how sick can they really be? The next chapter deals with this simple and yet complex question. Not surprisingly, the factors behind employment (jobs) and productivity (growth) are rather different and hence are discussed separately.

The second way to renew the Lisbon strategy is to put pressure on member states to reform. Both Kok and Barroso lay the blame for the lack of progress partly, if not fully, with the member states, in which the political will to reform is considered too weak. The national governments and parliaments must therefore adopt a national action programme how to increase the rate of growth and the number of jobs in their countries. Not ‘naming and shaming’ by the European Commission but rather the fear of losing political reputation should induce national policy makers to implement the programmes. Moreover, the idea seems to be that if countries undertake reforms at the same time, these reforms become less painful: ‘after all, everyone will benefit from the future that the Lisbon agenda is trying to shape’ Barroso (2005, page13) writes. The renewed Lisbon strategy should thus commit national policy makers to reform and help them to internalise the spillovers of national reforms to European partners. Is the open method of coordination, that is central in the implementation of the Lisbon strategy, necessary and effective in bringing commitment and changing the national into a European perspective? The last chapter deals with open coordination and the underlying principle of subsidiarity. Also in this chapter, the distinction between jobs and growth is essential.

The place of the report in CPB research

This report is not the first time that the CPB discusses the economic performance in Europe or the allocation of responsibilities between the Union and the member states, and it is not intended to say the final word on one of these topics. Instead, the report will refer to past and also to future research. First, this report will not discuss employment growth in Europe, and

[1] See http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2005/02/03/weu03.xml&sSheet=/news/2005/02/03/ixworld.html

ways to increase it, at great length. The scenario study by de Mooij and Tang (2003) deals with this rather extensively. De Mooij and Tang argue that employment growth is essential for sustaining European welfare states, but at the same time requires reforming them. Instead, this report will focus on productivity growth. Second, CPB and SCP (2003) looks at the idea of Social Europe. It is argued that the standard arguments for a European coordination of welfare states – scale economies and international externalities – are rather weak. This report will briefly reconsider these arguments. It will also consider other, often political arguments that seem to speak in favour of European involvement with labour market policies and institutions through the open method of coordination.

The report points at the potential importance of education and innovation. However, we will say little to nothing about on European involvement in these areas, as this is subject of ongoing research. Finally, it will also pay little or no attention to completing the internal market for services. Kox et al. (2004) estimate the consequences for trade and investment flows. CPB will later this year also try to assess the impact on economic welfare in Europe. Table 1.1 provides a schematic overview of the research topics and output.

Table 1.1 Overview of main CPB research on productivity and employment in Europe

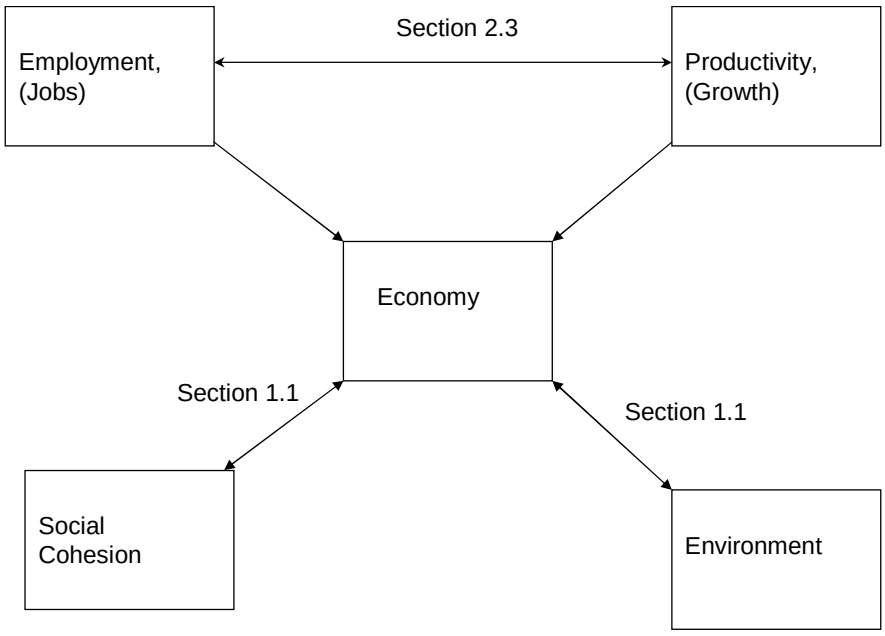
	Growth (productivity growth)	Jobs (employment growth)
Past performance and future trends	Chapter 2 on European slowdown	De Mooij and Tang (2003) on European welfare states Future research on the choice between leisure and work
The role of European Union	Kox, Lejour and Montizaan (2004) on the internal market for services Future research on education and innovation	CPB and SCP (2003) on Social Europe
	Chapter 3 on open coordination	Chapter 3 on open coordination

1.1 The price to pay for jobs and growth: social cohesion and environment

Up to now the aim of raising economic growth in the European Union has been conditional in the Lisbon strategy. Two broad conditions have been recognised: economic growth should not come at the expense of social cohesion and should not bring damage to the environment. These conditions reflect the idea that welfare is not identical to economic production and income. More specifically, the two conditions reflect the concern that boosting economic growth may be at odds with maintaining social cohesion and the environment. Barroso's European Commission seems to sweep this concern aside. Jobs and growth are explicitly put centre stage. Moreover, the Commission seems to argue that jobs and growth will only help European countries to achieve the other non-economic goals. Growth is regarded essential for keeping the European welfare states sustainable. With regard to sustainability, investing in a clean environment is not

seen as a drag on economic growth, but rather is assumed to provide a boost to innovation. Is the concern for a trade-off relevant or is Barroso right to sweep this concern aside? This section discusses separately two possible trade-offs: between economic growth (predominantly jobs) and social cohesion and between economic growth (mainly productivity) and the environment. As Figure 1.1 shows, a trade-off between productivity and employment growth is discussed in the next chapter. The relation between social cohesion and the environment is left out, as we consider them to be hardly related.

Figure 1.1 Trade-offs between the four essential elements of the Lisbon strategy



1.1.1 Economic growth versus social cohesion

In the Lisbon strategy the aim of maintaining social cohesion has been worked out in various ways.[2] Central to the concept of social cohesion is income inequality, and income redistribution to keep inequality limited. European economies are characterised by an elaborate welfare state: social security, tax and other systems that aim to protect individuals against unforeseen shocks in income and that aim to redistribute purchasing power from rich to poor. As a result, income distributions in European economies are more equal than in the United States. For example, income of the 10% richest is at least three times higher than income of the 10% poorest in the Netherlands and Sweden, whereas in the United States it is five and a half times higher. The income redistribution comes at a cost: it distorts individual decisions to work, to save and to invest. Some find this cost too high or fear that it will become too high.

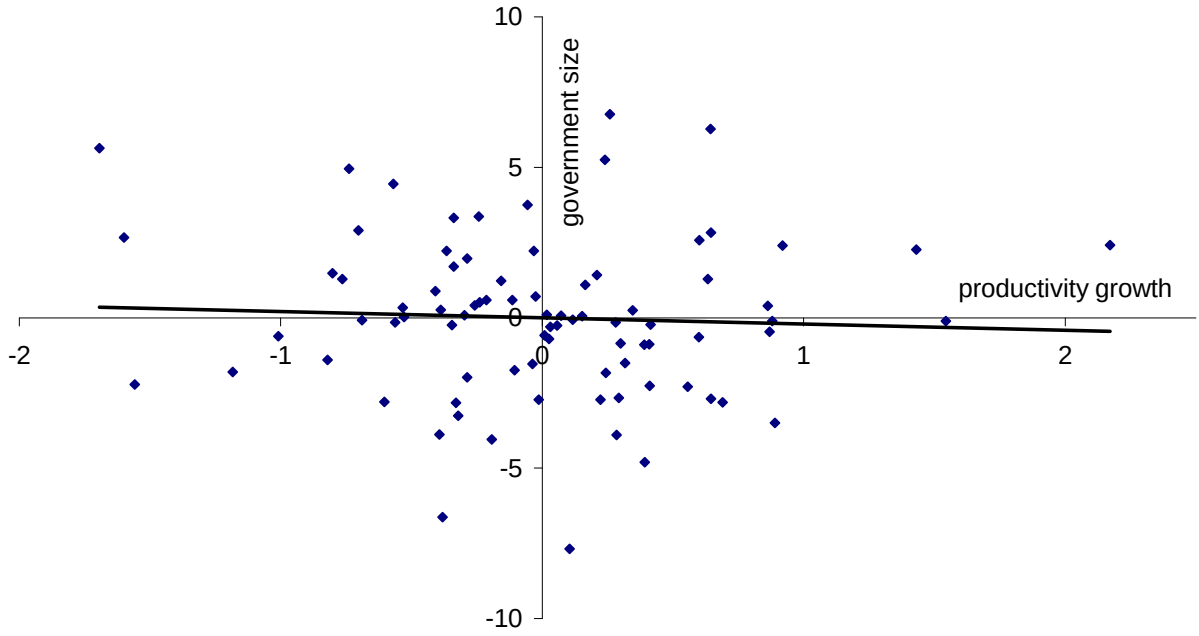
Barroso is not alone in thinking that economic growth is essential for maintaining the European welfare states. Sapir et al. (2003), for instance, maintain that to keep the financial

[2] In the Lisbon agenda, it comprises the distribution of income, the risk of poverty, unemployment, the regional dispersion of employment rates and the fraction of early school leavers.

position of the public sector sustainable the European countries need to see faster growth. In this view economic growth does not come at the expense of the welfare state, but is an instrument to limit income inequality and to maintain social cohesion. One argument within this view is that with a higher income the same number of workers are better able to pay the same – or a growing – number of social security benefits.

The financial burden on workers becomes less, however, only if wages rise (much) faster than social security benefits. A crucial assumption is thus a decoupling of benefit income from wage income. The relative income difference between workers and benefit recipients must become (much) larger in the future than it is now. This may trigger demand for higher social security benefits, which may partly or fully undo the effect of economic growth on the financial burden. Similar reasoning holds for other aspects of public expenditure, like old-age pensions and expenditures on - labour intensive - health care. When higher productivity (per worker) and higher wages translate into higher public expenditure, the financial position of the public sector may not improve at all, even though total income is higher. The tax revenue grows, but public expenditure grows as well. So, it is an empirical question whether allocating the pie is easier when the pie is larger.

Figure 1.2 Higher productivity growth is not associated with less public expenditure[a]



[a] Government size is measured by (log of) total public expenditure as percentage of gross domestic product. The five-year averages of all variables have been corrected to take account of country-specific and period-specific fixed effects. Data are from Ameco and cover an unbalanced sample of 19 OECD countries in 1978-2003 (with 5-year intervals).

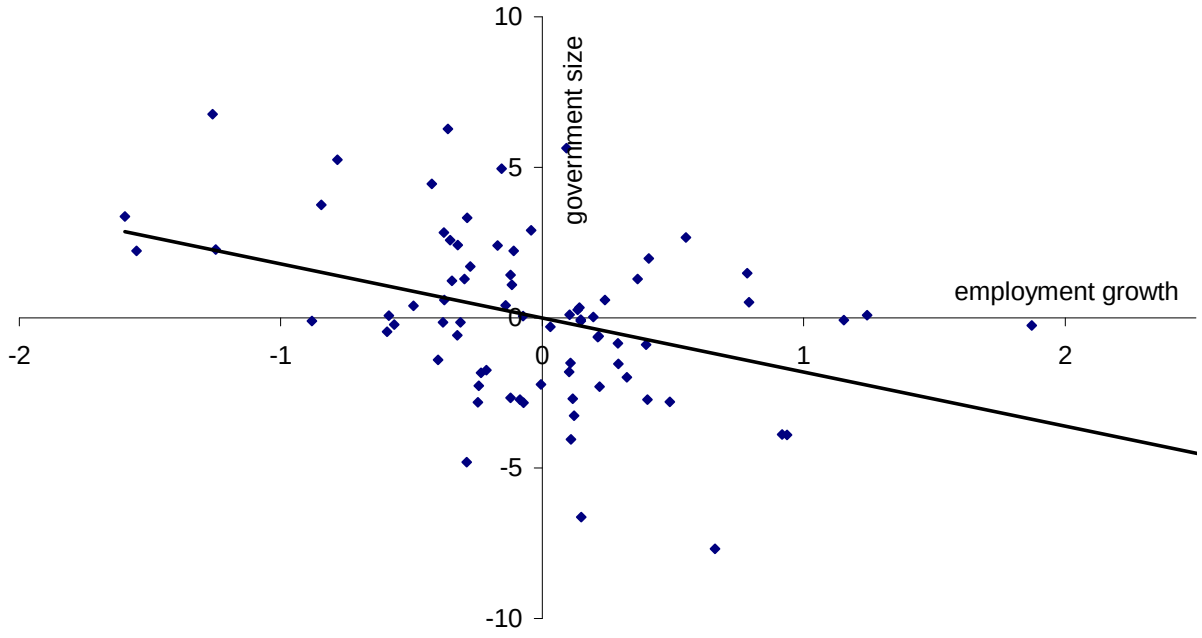
To see whether productivity growth changes the balance between the private and the public sector, Figure 1.2 plots the relation between the share of public expenditure in production and the growth rate of labour productivity. A negative relation may arise for two reasons. First, with

higher productivity growth wages (and other income) in the private sector outpace expenditure in the public sector. Second, a smaller public sector may imply a stronger incentive for the private sector to invest, innovate and grow. The difference between the two reasons is the chain of causation. According to the first higher productivity growth leads to a smaller government whereas according to the second it is exactly the other way around. Not only a negative relation may arise, but also a positive relation is possible. For instance, higher productivity growth may bring about a shift in demand in favour of public goods and services (Baumol's Law).

A clear relation does not emerge from the data (once country-specific and period-specific fixed effects are allowed for). An increase in the productivity growth rate is not associated with a relative decrease in government spending within the same five-year period. This underlines that productivity growth is an obvious way to keep the European welfare states in tact.

A more obvious way to lower the tax burden on worker than increasing productivity levels is raising participation rates. Figure 1.3 plots the relation between public expenditure as a percentage of gross domestic product and employment growth. A clear and negative relation emerges, implying that employment growth may indeed contribute to keeping the European welfare states sustainable. This should not come as a real surprise. When European governments are able to bring down unemployment and increase participation among, for example, older workers, they will see the tax revenue increase as well as expenditure on social security benefits go down. The relation between employment growth and social expenditures will not make political choices easier, however. To understand this, we turn to the question how may raise employment rates structurally.

Figure 1.3 Higher employment growth goes hand in hand with a smaller government[a]



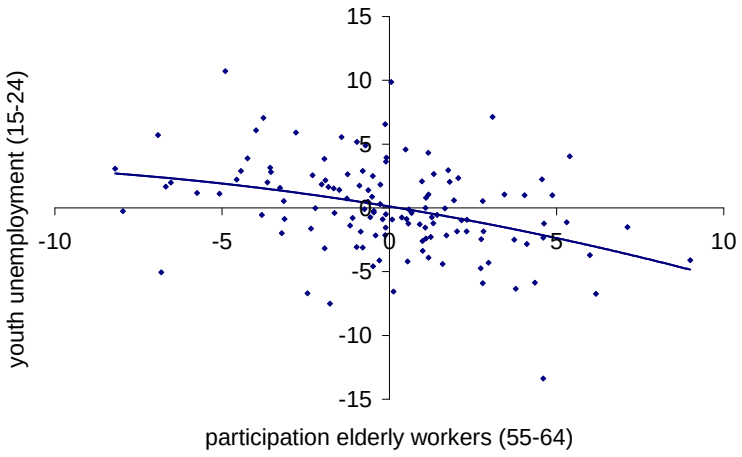
[a] See Figure 1.2 for an explanation.

Does higher participation lead to more unemployment?

Some fear that boosting participation is useless as higher participation will simply lead to more unemployment. Behind this fear is the idea that total employment is fixed. This is rather popular and persistent fallacy. To some extent it might be true in the short run (due to hiring and firing costs and labour hoarding), but in the long run it is clearly wrong. First, unemployment rates fluctuate only temporary, but are bounded in the long run. This implies that employment and labour supply grow hand in hand. In Europe both have grown by about 1.1% annually in the last two decades. Second, less participation of elderly workers has not led to less youth unemployment. The figure below shows instead that the opposite is true (where once again country-specific and period-specific fixed effects are taken into account). An increase in participation of relatively old workers is associated with a decrease, and not an increase, of unemployment among the relatively young workers. The negative relation indicates that non-participation of elderly workers and unemployment among young workers are driven by similar factors, most likely the labour market institution in interaction with macroeconomic shocks. Policies aimed at reducing youth unemployment by limiting elderly participation have at best been only temporarily successful.

The idea that total employment is fixed, does not find much support. If the Lisbon agenda has lead in some countries to a break in economic policy, from discouraging to encouraging labour supply, that alone is important success.

Higher participation of the old is associated with lower unemployment among the young[a]



[a] Both unemployment (among the young) and employment (among the old) are scaled with the labour force in the relevant age group. The five-year averages have been corrected for country-specific and period-specific fixed effects. The data are from the Labour Force Statistics of the OECD and covers an unbalanced sample of 28 OECD countries in 1968-2003 (with 5-year intervals).

To structurally reduce unemployment and permanently increase participation, labour market institutions need to be reformed. Shorter and lower unemployment benefits, less employment protection or combinations thereof are proposals in that direction. With reform comes the concern that more employment comes at price of more inequality. The labour market institutions in Europe are intended to protect workers against the whims of the markets by providing them income or job security. Reforming these institutions may then lead to larger income differences. Indeed, empirical work by de Groot, Nahuis and Tang (2004) confirm a trade-off between participation and inequality. They find that lower and shorter unemployment

benefits, a lower tax wedge and less coverage through collective wage is associated with higher participation but also leads to more income inequality. Interestingly, countries have partly escaped the trade-off through active labour market policies. Spending on things like training, matching and public jobs has had the impact of reducing inequality and raising employment. Similarly, de Mooij and Tang (2004) provide evidence that raising upper secondary education of the labour force has allowed countries to score well on both counts. The empirical work thus suggests that there is a trade-off between employment and equality. At same time, some countries may have the possibility to escape this trade-off by putting more emphasis on active labour market policies and/or on secondary education.

1.1.2 Economic growth versus the environment

Economic growth may come at the expense of the environment. Higher production is usually associated with higher energy use, higher emissions of greenhouse gasses and more local pollution. Until 1980 this link between economic growth and pollution clearly applies, as Figure 1.4 shows for the emissions of sulphur dioxides (SO_2), nitrogen oxides (NO_x) and carbon dioxides (CO_2) in Europe.

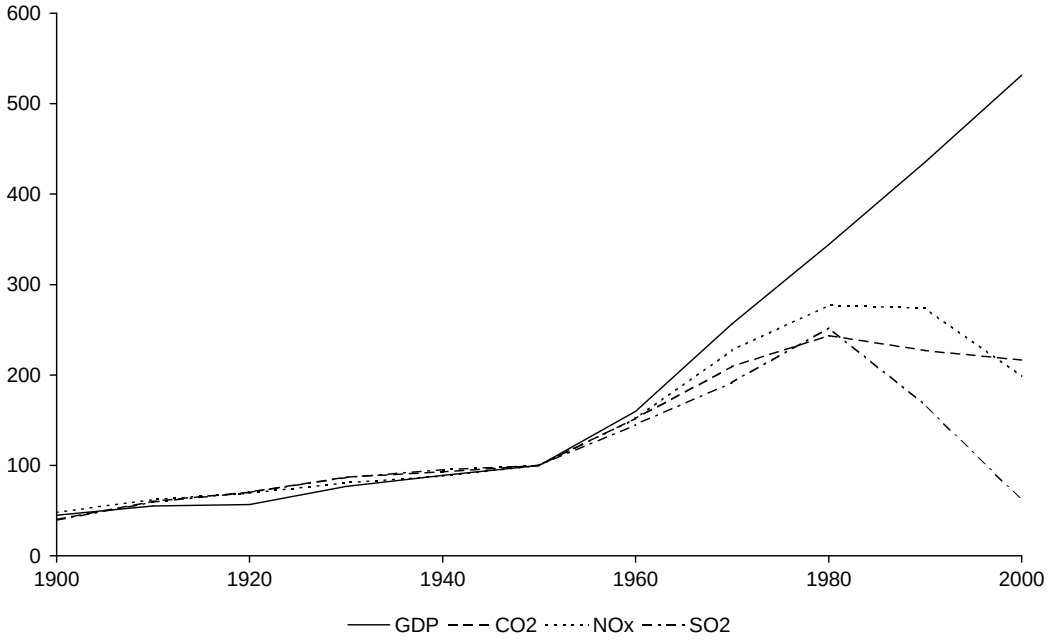
This negative relation between the economy and the environment is not an invariable law. In fact, some environmental problems have become less when countries have grown richer, as Figure 1.4 illustrates for recent decades. The emissions of sulphur dioxides (SO_2) in the EU25 have reached a peak in the eighties, whereas the emissions of nitrogen oxides (NO_x) have attained at a maximum in the nineties. Thereafter the emissions of both have fallen even though the European economy has continued to grow.

This non-monotonic relation between the economy and the environment is known as the Kuznetz-curve. At the initial stages of development the economy has a clear priority over the environment. At those stages, reducing poverty is essential and economic growth is instrumental in achieving this, at the expense of the environment. At later stages social preferences shift from the economy to the environment. Once poverty is under control, the concern for the environment builds up and the wish for good living conditions becomes dominant. Still, economic growth leads to more pollution, but now societies put effort in emission reductions. These reductions in emissions do not come automatically, but are a deliberate choice. Policies that lead towards forms of sustainable economic growth, become eventually socially and politically feasible.

Policies to decouple the economy and the environment are not always feasible. First, national decision makers do not take into account the international benefits from national environmental policies. This is the classical problem of collective action. Countries benefit directly from reducing local pollution like smog, stench and noise. Indeed, as indicated before, national and European policies have been effective in reducing emissions with local pollution, like sulphur dioxides and nitrogen oxides (SO_2 and NO_x respectively). However, the incentives for individual countries to reduce their emissions with global environmental externalities, like

greenhouse gasses (CO_2) are much weaker. Figure 1.4 shows that the CO_2 emissions have not fallen as fast as the emission of SO_2 and NO_x and are projected to increase in 2020. Second, competition among governments may stop them from effectively fighting even local problems. The difference between energy taxes on households and on firms is telling. The competition among government to attract firms with favourable conditions will only grow in the future. Both reasons imply that a reduction of emissions at higher stages of development is not an automatic process. In fact, rich countries do not always choose for a cleaner environment, whereas poorer countries do, which implies that the empirical evidence for the Kuznets-curve is not very strong (see for example de Bruyn, 2000).

Figure 1.4 Emissions of CO_2, NO_x and SO_2 have not followed production in the EU25 (1950 = 100)[a]



[a] Source: RIVM (2004).

Limited coordination is one threat to sustainable growth, the costs of environmental policy are another. Some claim that the costs of Kyoto are prohibitively high and are a drag on economic growth. This is exaggerated. CPB (2004), for example, calculates for different scenarios the costs of stabilising greenhouse gas emission (at 550 ppmv) for the EU15 under the assumption of international emission trade. In 2040, these costs range from 2.2% of national income in the scenario Strong Europe to 6.2% in the scenario Global Economy. This boils down to foregoing one or two years economic growth. Clearly, these costs are not negligible but are not prohibitive either. Others claim that eco-efficient innovations stimulates, rather than deters, future economic growth, by saving on inputs which will likely be come scarcer and therefore more expensive. Of course, this would make the costs of environmental policy negligible. The empirical support for this view is weak or even lacking.

The past experience suggests that discussing ‘the’ trade-off between economy and environment is not appropriate. Different environmental problems have developed differently over time. Looking at the future, policies to break the link between the economy and the environment, i.e. to escape the trade-off between the two, are not self-evident. They will require more than before international and/or European coordination. Especially the emissions of greenhouse gasses are likely to grow, although not at the rate of economic growth, unless effective action is taken. It is still an open question whether Kyoto provides a strong framework for international agreements and will lead to European action that effectively breaks the link between economic production and greenhouse gas emissions. They will require also that research and development is adequately directed towards the main economic problems in relation to the environment.

Conclusion

Barroso’s claim that jobs and growth are essential for maintaining social cohesion and the environment, does not seem realistic. Economic growth will come at the expense of the environment unless policies are implemented to break the link between the two. These policies do not seem to thwart economic growth but are not free either. The main problem is perhaps the organisation of these policies: especially if these require international and/or European coordination.

Economic growth does not ensure that the European welfare states are sustainable in the future. Required is employment growth (and not productivity growth). This is possible but seems to necessitate reforms in these welfare states. Employment growth as a result of these reforms is likely to come at the expense of higher income inequality. However, some countries may avoid this trade-off up to some point, for example by shifting from passive to activating social security.

2 Growth and jobs

Ever since the European leaders formulated the ambition of becoming the most competitive economy in the world, economic growth in Europe is faltering. This partly reflects a cyclical downturn. Some unexpected factors, like the stock market collapse and the sudden threat of terrorism, may have prolonged this downturn. Nevertheless, an upturn usually follows a cyclical downturn.

However, the poor growth rates in recent years partly reflect structural problems.[3] First, labour markets in many European economies are considered sclerotic. Symptomatic are high unemployment benefits, strong employment protection and powerful trade unions. Moreover, governments find it difficult to reform labour market institutions as they often require interventions in the social security system. Second, productivity growth is a concern: it has been high until the seventies, but has fallen since. Several explanations have been put forward. Some think that Europe invests too little in knowledge, in particular in R&D and education. Some think that Europe does not benefit enough from the new possibilities of ICT. Others think it is a combination of the two. Whatever the explanation, the slowdown in productivity growth will make the Lisbon ambition unfeasible, even in the long run.

There is a second reason why the ambition to become the most competitive economy has become more difficult to realise: the economic performance of United States has improved in the last ten years. With the problems of imperfect labour markets and poor productivity growth in mind, the credo of Barroso's European Commission 'growth and jobs' does not seem odd.

The next section compares the performance of several European economies over time and with the track record of the United States. Section 2.1 will show among other things that the European employment rate in persons has grown faster than the American in the last 15 years. In section 2.2 we will argue that future trends, rather than past performance, will require reforms of European labour markets. This section reiterates earlier CPB work and remains therefore short. Instead, relatively much attention is given to productivity growth. The next section will show that productivity in Europe is relatively high but that its rate of growth is falling over time since the 1970s. In section 2.3 we will argue that the European slowdown is not in a straightforward way related to investment in knowledge. The slowdown is rather the logical outcome of European successes. The American acceleration, on the other hand, is driven by investment in ICT, especially in services.

2.1 Growing number of jobs but falling rates of growth

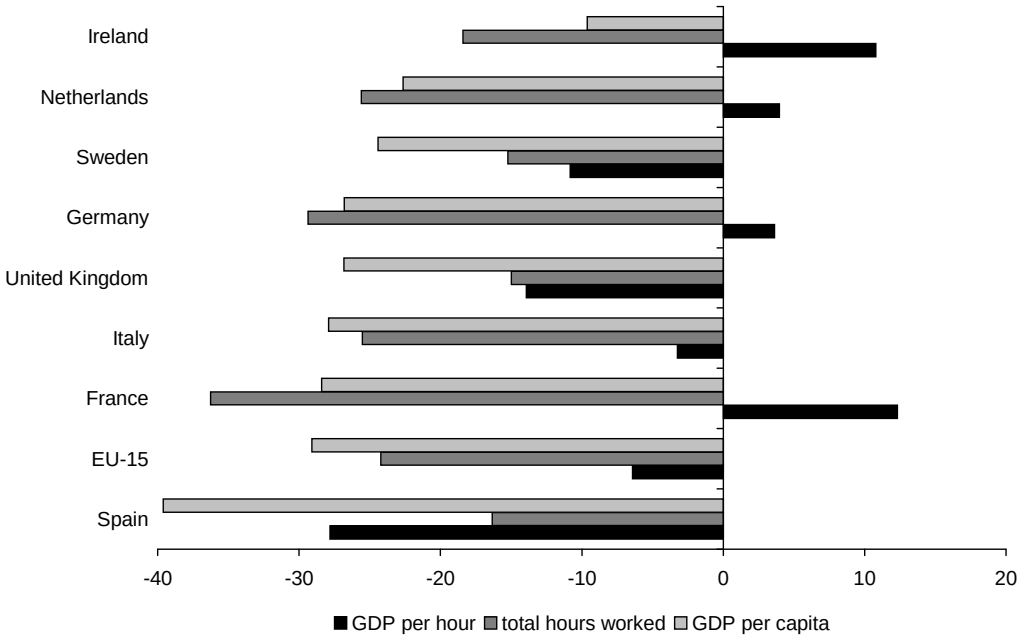
Americans are richer than Europeans. Production per head of the population is roughly 30% higher on the other side of the Atlantic than it is in Europe. No wonder that economic

[3] Sapir et al. (2003) forcefully point at these structural problems.

performance of the United States is often put forward as an example for the European Union and its member states.

Production as a measure for economic performance does not take into account whether it is the result of high productivity or much effort. Hard but not smart work implies long working hours and little leisure. Needless to say that leisure is also important for the economic welfare of households and individuals, even though it is not reflected in the usual statistics of income and production.

Figure 2.1 European productivity per hour is high but hours worked are low (percentage difference with USA)[a]



[a] Decomposition of GDP per capita in 2003 by productivity (GDP per hour worked) and employment (hours worked per capita) in percentage deviation of the United States.

Source: GGDC (Total Economy Database, August 2004, http://www.ggdc.net) and own calculations for the EU-15.

To roughly distinguish between hard and smart work, Figure 2.1 decomposes production per capita into productivity per hour and total hours worked per capita. The variables for 8 European economies and the average for the European Union (of 15 members) are expressed as percentage difference with the United States and are ranked according to GDP per capita. In France, for example, GDP per capita is 28% behind the United States: the difference in hours per capita is 36%, which is partly compensated by a 12% higher production per hour.

An important observation from Figure 2.1 is that productivity per hour worked is *not* uniformly lower than in the United States. Workers in Ireland, the Netherlands, Germany and France produce more per hour than their American colleagues. Even the EU-15 average,

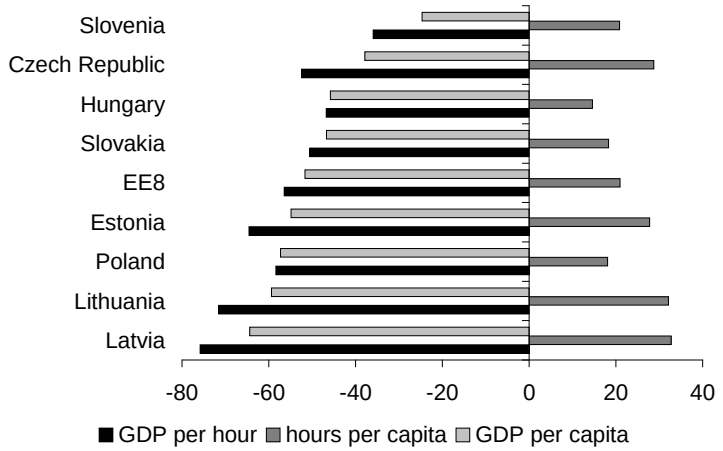
including the relatively low-productive countries Greece, Portugal and Spain, is only moderately behind.

New member states

This study focuses on the 15 member states that have formed the European Union up to 2003. In contrast to the new member states, a fair comparison for these countries with the United States is possible for two reasons. First, both the EU-15 countries and the United States have known fairly similar conditions for several decades: they are market economies with good access to the world markets. New member states from Eastern Europe compete at similar conditions only recently. Second, reliable statistics for productivity for a couple of decades are not available for the new member states.

To give a brief indication of the situation in the new member states, the figure below presents the level of GDP per capita, decomposed in employment (in hours) and productivity per hour in deviation of the European Union of 15 members.

Eastern Europeans work more but less efficient than in the EU-15[a]



[a] In deviation of Figure 2.1, the percentage deviation of the EU-15 is shown. EE8 is the average of the 8 new member states from Eastern Europe.

The picture is clear: labour productivity per hour clearly lags behind the EU-15 average, and is fully responsible for the lag in income per capita. In terms of employment, however, workers in almost all of the 15 member states work on average less than their Eastern European colleagues.

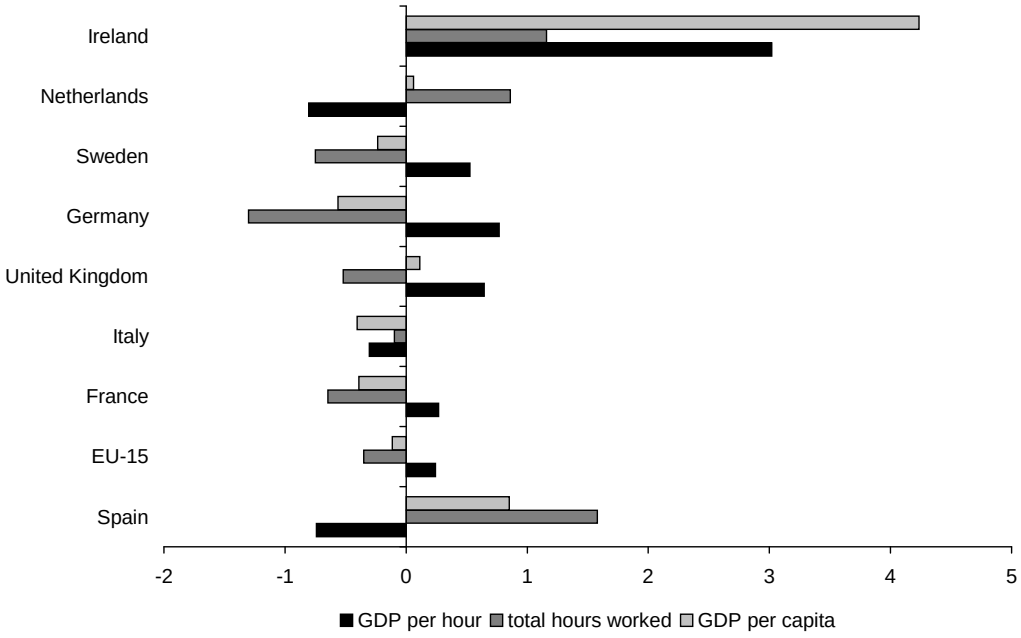
The income gap between the two economic blocs is largely explained by the difference in hours worked per capita: annual hours worked in European countries are relatively low, lagging 5% to 35% behind the United States. Within Europe, working hours are relatively high in countries with relatively low productivity levels (per hour), like Spain, Portugal and Greece. Shortest hours are observed in France, Germany and the Benelux. This suggests a negative relation between working hours and productivity per worker, even in the long run. Are Western-European economies productive, for example because unproductive workers are excluded from the labour market? We turn to a possible trade-off in section 2.3.

Developments over the period 1989-2003

Productivity per hour is high in many European countries. That productivity is below the US average in other European countries is not an immediate cause for concern. Typically, these countries like Greece and Portugal, have joined the European Union relatively late. As long as they catch up to the high-productive European countries, the European average will come close to or even exceed the American level of productivity in due course.

Figure 2.2 shows the growth rates within the European Union in the period 1989-2003, in deviation of the growth rate in the United States.[4] Again, GDP per capita is decomposed in productivity per hour and total hours worked per capita.

Figure 2.2 Over the last 14 years the growth difference between the EU and the USA is small[a]



[a] Decomposition of the growth rate (%) of GDP per capita in deviation of the growth rate in the United States (1989-2003), see Figure 2.1 for data definition and source.

For the European Union growth of GDP per capita was 1.7% annually and roughly kept pace with the United States. Whereas employment growth was relatively low in the period 1989-2003, productivity growth in the European Union was clearly higher than the United States.

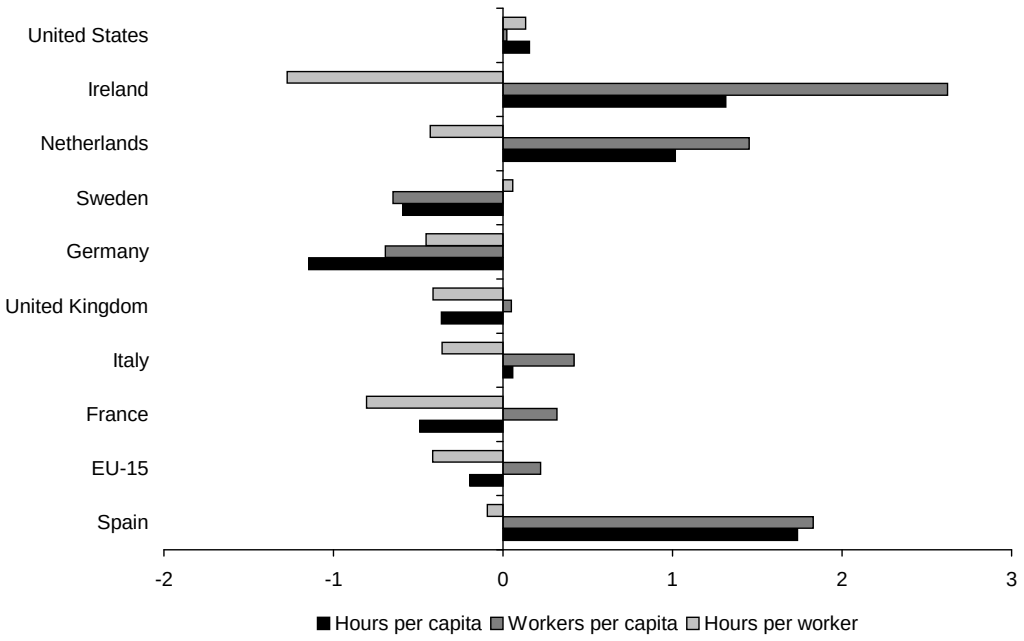
The differences across European countries were, however, huge. Ireland performed remarkably well, especially in terms of productivity: the growth differential for GDP per hour was on average 3% during the 14 years, and was enough to close the initial productivity gap with the United States of 30%. However, the performance of Spain (but also Portugal and Greece) was disappointing: Spain was able to reduce the gap in GDP per capita, but not the difference in GDP per hour worked. These countries were not able to raise their productivity

[4] The GGDC (2004) data set is balanced for the period 1989-2003, including united Germany.

levels, even though they had the advantage of backwardness (i.e., improving productivity by adopting technologies from the most advanced economies).

In the period 1989-2003 the gap of EU-15 with the United States in production per capita grew, for which the difference in employment growth was responsible. Behind this lagging growth in hours worked per capita, two developments can be observed. First, European economies created more jobs than the United States, as shown by the bars for 'workers per capita' in Figure 2.3. Indeed, in the latter the fear of jobless growth emerged. In contrast, European countries like Ireland, the Netherlands and Spain, and to a lesser extent France and Italy, saw a remarkable growth in participation rates in the period 1989-2003.[5] Second, the working weeks of European workers declined, with Sweden as the single exception. Working weeks became on average shorter and the number of part-time jobs grew. Europeans opt for a different combination of work and leisure than Americans. The box 'Strong love for leisure or just high taxes on work?' goes into the reasons behind this difference.

Figure 2.3 In Europe, more workers that work fewer hours (annual growth in 1989-2003)[a]



[a] Source: GGDC (2004) and own calculations for the European Union. Population is restricted to the working-age.

[5] The Lisbon agenda pays special attention to the participation of women and elderly. Readers interested in the European scores should consult CPB/SCP (2003).

Strong love for leisure or just high taxes on work?

Two competing explanations are put forth in the literature to explain the declining and relatively short working weeks of European workers. First, the decrease in hours worked per capita may reflect a stronger preference for leisure over goods as wages increase (Blanchard, 2004). European workers use part of their higher income for leisure; American workers prefer more consumption of goods. Alternatively, the short working weeks may reflect distortions, like high (marginal) taxes on work (Prescott, 2004). This explanation makes sense only if workers respond quite elastically to changes in net wages, as Prescott assumes. The discussion has not been settled yet, though it has important implications for policy. The second explanation asks for a reduction in labour-market (or tax) distortions whereas the first implies that the gap in income per capita between Europe and the United States should be taken as it is: a personal, deliberate choice. The next *European Outlook* by CPB and SCP will study the choice between leisure and work in detail.

The break in the mid nineties

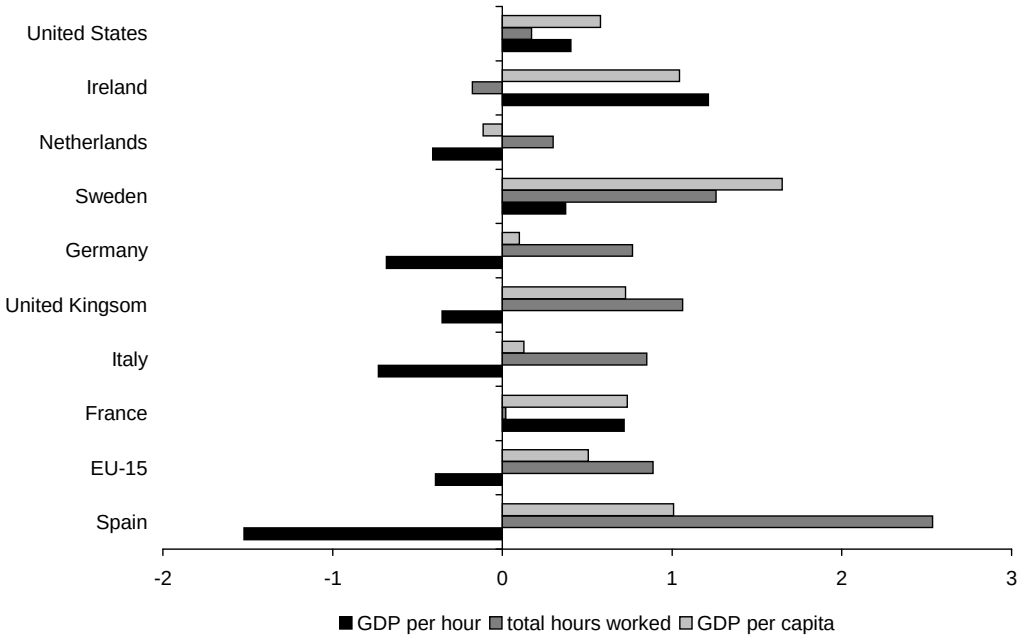
The discussion thus far does not provide much reason to be gloomy about the productivity performance of the European economy or to praise the American dynamics. In many European countries productivity is higher than or close to the American level, and for the European Union it has grown on average somewhat faster than in the United States. Yes, the United States could be said to outperform the European Union in terms of employment, considering both the levels and the growth rates of total working hours. Whether or not this is a problem for Europe is not immediately clear. First, it might be a matter of choice: Europeans use their prosperity to enjoy more leisure. Second, it might be a matter of division of labour, and therefore a measurement issue: Americans hire a cleaning lady, whereas Europeans clean their houses themselves: the first activity is measured in the employment statistics, unlike the second.[6]

One has to focus on the period after 1995 to understand the gloom about the European economy and the optimism about the American ability to innovate: after 1995 productivity growth has accelerated in the United States, whereas growth is slowing down further in the European Union. Figure 2.4 visualises this by showing the growth acceleration or deceleration of GDP per capita . Note that it is different from the previous figures: it does not directly compare the performance in the European Union and the United States but rather cuts the period 1989-2003 in two and compares the later period 1997-2003 with the earlier period 1989-1996.

Both economic powers saw the growth rate of GDP per capita increase. The United States hardly accelerated more than the European Union of 15 countries, but the sources of growth differed remarkably. In Europe, faster growth in total hours worked, especially in the number of workers (per capita), compensated for the slowdown in productivity growth. In the United States, both sources were responsible for the acceleration. In other words, after 1995 the main difference between the two economic blocs was the *change* in productivity growth.

[6] The upcoming *European Outlook*, to be published in September 2005 by CPB and SCP, is devoted to the divisions of time between work, household production and leisure.

Figure 2.4 Productivity growth slows down in Europe, but accelerates in the United States[a]



[a] Decomposition of the acceleration of GDP-per-capita growth between 1989-1996 and 1997-2003, see Figure 2.1.

The acceleration in US productivity growth and the slowdown in EU productivity growth are widely documented in the growth-accounting literature[7], though the particular numbers vary from study to study, depending on the country sample (Euro area versus European Union), the time span and the data source. Our measure for the slowdown, a decline from 1.5% to 1.1%, is at the lower bound of what can be found in the literature. Much more dramatic are the figures of Fiani (2004), who observes a slowdown in the growth of hourly productivity for the Euro area of 1.6 percentage points (1991-1996 versus 1997-2001).

A structural decline in productivity growth since the seventies

Productivity growth in Europe has not slowed down all of a sudden, but rather shows a structural decline, see Figure 2.5. In the seventies, the European countries clearly outperformed the United States in terms of productivity growth. Even in the eighties, US commentators (see Baumol et al., 1989, Dollar and Wolff, 1993, and Nordhaus, 2004) were very concerned about the poor productivity growth in their country. Indeed, with the exception of France and the Netherlands, the average European rate of productivity growth was still higher than the American rate at that time. The lead of Europe gradually declined, however. In recent years, productivity growth in Europe was what it used to be in the United States in the seventies and eighties.

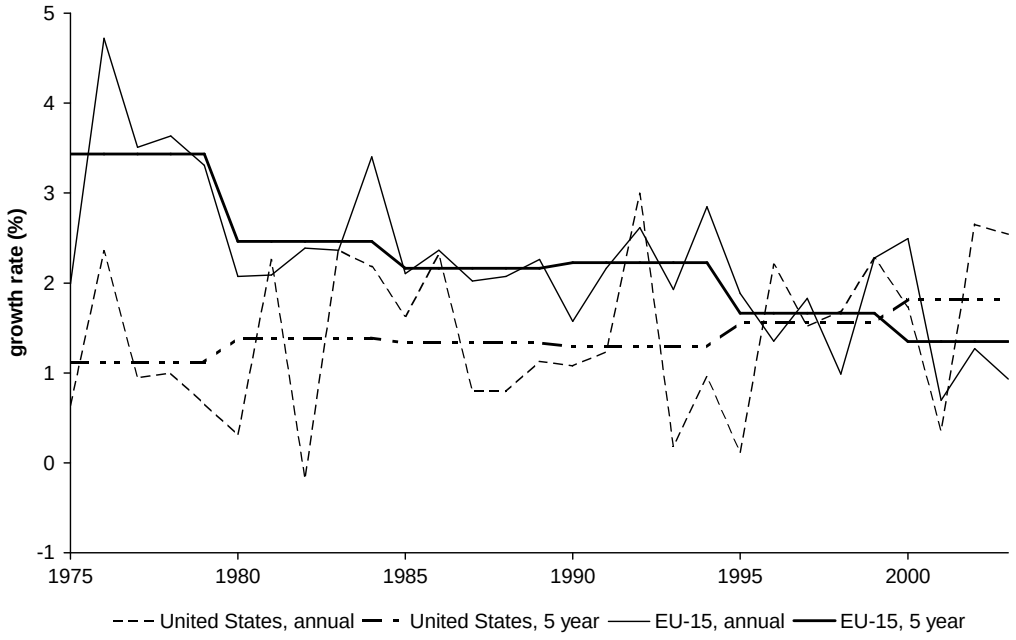
For the United States, Figure 2.5 shows that the acceleration of productivity growth since 1995 occurred after a long period of stable growth. Until about 1995 growth in productivity per

[7] See Daveri (2004), Denis et al. (2004), Gordon (2004) and O'Mahony and Van Ark (2003).

hour was on average 1.3% annually, but then it speeded up. The growth rate accelerated from 1.5% in 1995-1999 to 1.8% in 2000-2003. In the last period the growth rate in the United States was about a half percentage point higher than in the European Union of 15 countries.

From Figure 2.5 the concerns about the European performance become clear. The difference in productivity growth between the United States and the European Union is perhaps not large, but the direction of change is worrying. In the 'old world' the rate of productivity growth goes downhill, whereas in the 'new world' the pace has picked up. Of course, this does not bode well for the Lisbon ambition. Would the change be structural and extend in the next decades, the United States soon becomes – again – the unchallenged productivity leader in the world.

Figure 2.5 The productivity slowdown in Europe (EU-15) is structural[a]



[a] Growth rate of productivity per hour 1975-2003, both annual and their 5-year averages, running from 1975-1979, 1980-1985 etc; the final period 2000-2003 covers only 4 years. Source: GGDC (2004).

Conclusion

In the period 1989-2003 the European Union was able to raise employment. Indeed, in 2003 quite a few countries score equally well or better than the United States on participation in persons. (Since a few large member states have a relatively poor employment record, making the Lisbon target for participation difficult to meet in the near future.) Whereas the European economies have not been bad in creating jobs in the past period, we will argue in the section 2.2 that in the near future even more jobs are needed: participation has to increase to relieve the growing pressure on the European welfare states.

Looking back, the main problem with the economic performance of the European Union has not been 'jobs' but 'growth'. European productivity growth is slowing down. At the same time, the

American rate of productivity growth has jumped, i.e. has increased after a period of stable and relatively low growth. In section 2.3 we will go deeper into the reasons behind the European slowdown and America's acceleration.

2.2 Future trends and employment growth

In the past years the European Union (of 15 members) has seen its employment in persons grow faster than its population. Employment in hours has grown less rapidly: hours worked per worker have continued to fall. Europeans spend thus relatively much time on leisure and household activities. The employment growth in the past is not an immediate reason to worry. Rather, the future gives rise to concern. There are several trends that threaten the financial sustainability of the public sector in European economies. In other words, they put the public sector under pressure. Employment growth is essential for relieving this pressure (see section 1.1)

Pressure on the welfare states

Structural trends put pressure on the public sectors in Europe, leading to similar problems in different European countries. According to de Mooij and Tang (2003), these trends together will in particular make the European welfare states in their current forms unsustainable, forcing national government to choose for change. In particular four trends are relevant:

- *Ageing populations* raise public expenditures on old-age pensions and health care. Besides, relatively slow productivity growth and high income elasticities will lead to extra demand for publicly provided services (i.e. Baumol's Law).
- The position of high-skilled workers on labour markets is steadily improving relative to *low-skilled workers*. That the income differences between the two groups have not grown (fast) in the recent past, is a result of the fast increase in supply of high-skilled workers. When the increase levels off, as is expected during the coming decades, the income differences may start to grow. Higher benefit levels prop up wages of the low skilled, but also lead to more unemployment among them.
- Society has become more heterogeneous. Individualisation as well as immigration has contributed to that. More *heterogeneity* makes economic policy less effective. Some specific transfers, for example, not only benefit those who need support, but are also provided to those with high incomes. Heterogeneity also raises the demand for diversity, which the public sector often fails to deliver.
- The choice set of individuals has expanded, which has increased the response to income taxes and income transfers and has amplified the distortionary consequences of taxation. Adding to this is the increasing mobility of capital and firms. With further integration of capital and good markets, this mobility will only increase. This also increases the *costs of taxation*.

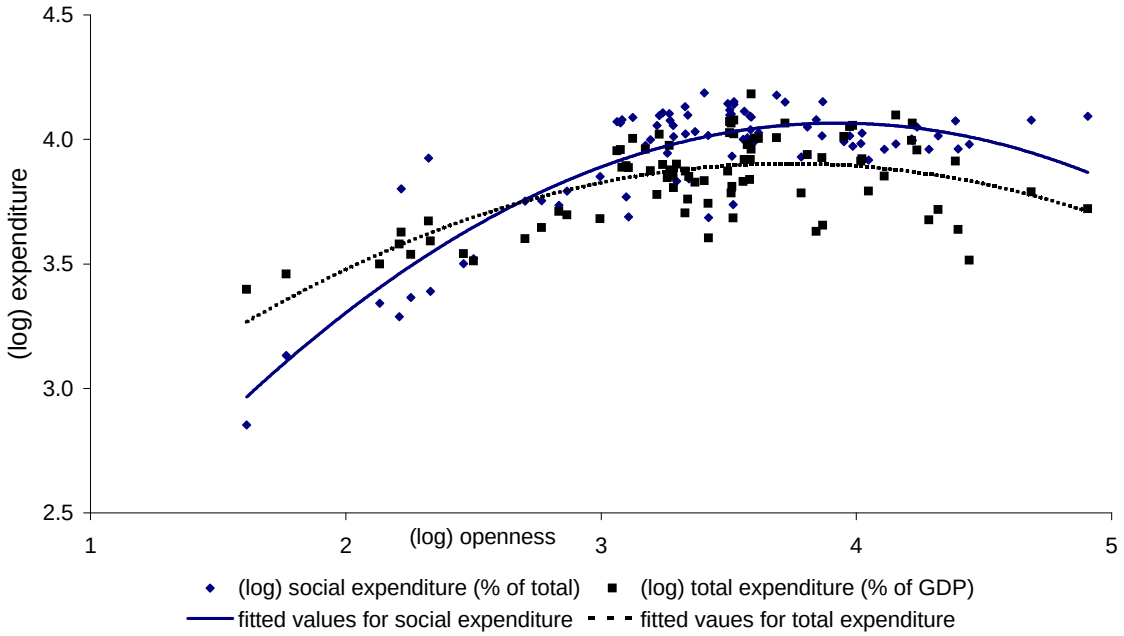
International integration and the welfare state

Is globalisation not one of the important threat to the European welfare state? As a result of integration, firms can escape the relatively high tax burden in Western European countries by relocating their activities to countries with relatively low taxes. These countries can no longer afford extensive and thus expensive social security systems. International integration and the welfare state do not seem to mix.

The logic is flawless but the analysis is not. Firstly, it assumes that firms are extremely mobile, whereas in fact they are not. Proximity to consumers and suppliers is an important aspect of location (see Brakman et al., 2005). Indeed, the rich European countries offer good access to a large output market and specialised input markets, making firms reluctant to leave. Second, the analysis is incomplete. When firms tend to relocate their activities, employment tends to fall as well. To restore equilibrium on the labour market, wages must fall (or grow for some time at a lower pace). In equilibrium the relatively high taxes, partly in the form of social security contributions, are compensated by relatively low wages. This situation confirms a general rule in the economic literature on taxation saying that the immobile factor bears the burden of taxes in the end, although formally the mobile factor, i.e. the firm, may pay them. The implication of this rule is that European and international integration shifts the burden of taxation, from the (more) mobile factor to the immobile factor. European countries can afford extensive social security systems as along as they can afford a higher tax burden on labour. Summing up, since firms are not fully mobile and lower wages may compensate higher taxes, the impact of integration on social spending may not be as negative as a simple partial analysis seems to suggest.

Rodrik (1998) argues that the impact of international economic integration on social spending could even be positive. As a result of integration, economies become more vulnerable to external shocks. This raises the demand for (public) insurance. Governments may respond to this demand and extend, rather than downsize, the social security systems. A first look at the data seems to corroborate Rodrik's view. Figure 2.6 plots openness, defined as the average of exports and imports as a ratio of gross domestic product, against two measures of public spending, namely the share of transfers in public expenditure and the GDP-share of total public expenditures. The figure suggests that openness is associated with more transfers (as a percentage of total public expenditure) and that openness leads to more public spending (as a percentage of total production). A better look at the data learns that just a few observations give rise to a positive relation and that for the bulk of the observations a clear relation does not seem to emerge. Clear is, however, that integration does not necessarily lead to downsizing of the European welfare states.

Figure 2.6 Open economies do not show lower income transfers or a smaller government[a]



[a] Social public expenditure concerns transfers both in money terms and in kind, and is expressed as a percentage of total public expenditure. The government size is measured by total public expenditure as a percentage of gross domestic product. Five-year averages are shown. The data are taken from Ameco.

Conclusion

Four trends – ageing, changing skill composition, increased heterogeneity, rising costs of taxation – put pressure on the welfare state: public expenditures increase, become less effective and more costly to finance. One way to bring down public expenditure and to relieve the pressure, is to increase the employment rate. Jobs should therefore be high on the policy agenda in the different European countries. Of course, more jobs may require changes in the current welfare state arrangements.

2.3 Determinants of productivity growth in the past

2.3.1 Europe's slowdown: victim of its own success

By trying to invigorate the European economy, the Lisbon strategy is meant to fight pessimism about the economy. The gloom about Europe's performance is wide-spread. One reason is the trend of falling productivity growth rates. In the late nineties European economies have shown, according to several sources, a significant decline in the productivity growth rate. This continues a trend that has started after the first oil crisis. The trend suggests that Europe will see its relative position in the economic league of nations deteriorate, especially since a country like China sees its income double in every 10 years and the American economy has surprised observers by showing an acceleration in productivity growth rates.

This section challenges pessimism not by promising a glorious future but rather pointing to a glorious past. The slowdown, we will argue, is partly the inevitable consequence of Europe's success. First, high employment growth – one of the objectives within the Lisbon strategy – is partly responsible for disappointing productivity growth in the late nineties. Second, many European countries have caught up with the United States and have exhausted their potential to grow by imitating state-of-the-art technologies. The logical implication is that their rate of productivity growth has fallen. Furthermore, structural reasons for the slowdown do not seem strong. Yes, nowadays the European Union invests relatively less in R&D and spends relatively less on education than the United States, but this was also true ten, twenty or thirty years ago. Moreover, the European Union has not seen its expenditure on R&D and on education, as share of GDP, fall. Only in interaction with catching up might R&D and education play a role: the low expenditure levels might contribute less to productivity growth when countries approach the productivity frontier. Even in this case is Europe's slowdown the mirror image of its own success: high employment growth in recent years and catching up in recent decades.

In the short run employment growth hurts productivity growth

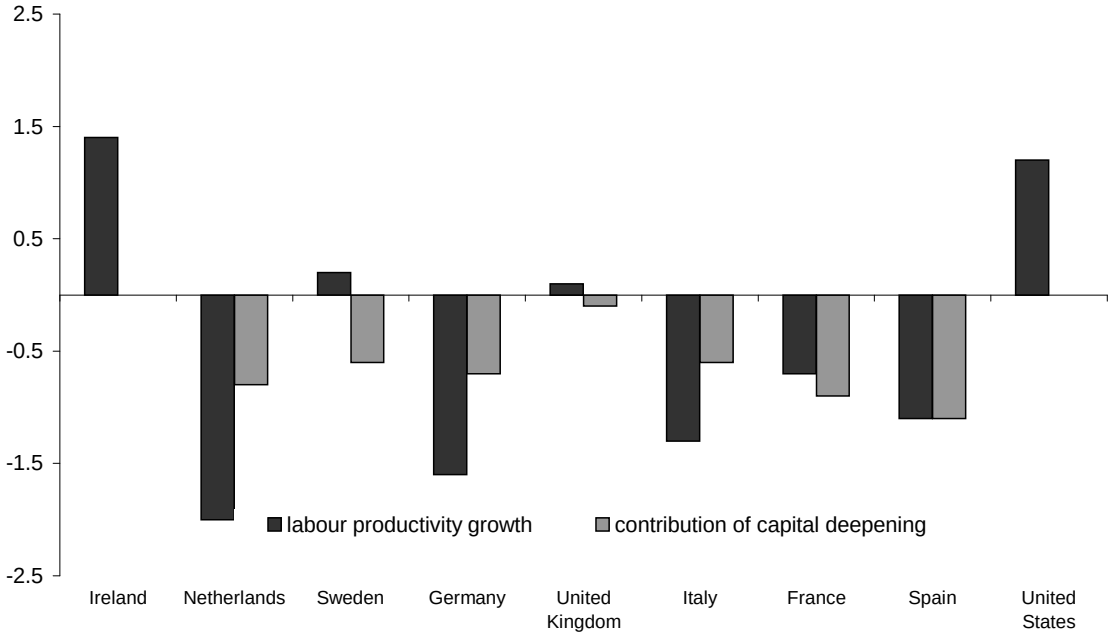
In many European countries productivity growth in the second half of the nineties was significantly lower than in the first half. At the same time, the growth of employment (in persons) recovered markedly from −0.35% in the first half to 0.65% in the second half. In the United States the concern was exactly the opposite: the country showed a remarkable increase in productivity growth but was not able to create jobs. There was fear for jobless growth.

The different country experiences suggest a trade-off between employment growth and productivity growth, at least in the short run. One explanation is that irrespective of the economic conditions high-productive workers are employed and that depending on these conditions the low-productive workers are invited to enter or forced to leave the labour market. With fast(er) employment growth, like in the second half of the nineties, the low productive workers enter, reducing the average productivity of workers. This effect of productivity through the composition of the labour force has been studied for the Netherlands, with the spectacular employment growth in the nineties. The effect exists, but is quantitatively small (CPB, 2004). Another, more relevant explanation for the short-run trade-off is the delayed response of capital growth to a change in employment growth, such that the available stock of capital per worker falls when employment expands. As a result, labour productivity slows down as production becomes less capital intensive. Below we clarify in two steps why this explanation is relevant for the nineties.

The first step relates the change in labour productivity growth (from the first to the second half of the nineties) to the change in capital deepening. Capital deepening contributes to labour productivity growth. The more capital goods are available for a worker, the higher the productivity of this worker. Figure 2.7 shows for several countries the change in labour

productivity growth and the contribution of capital deepening to that growth. The difference between the two is usually referred to as total factor productivity.

Figure 2.7 A falling capital-labour ratio largely explains the slowdown in the late nineties[a]



[a] The figure shows the difference between the period 1996-2000 and the period 1989-1995. For Ireland and the United States, the change in the contribution of capital deepening is negligible. Source: Economic Outlook (2004).

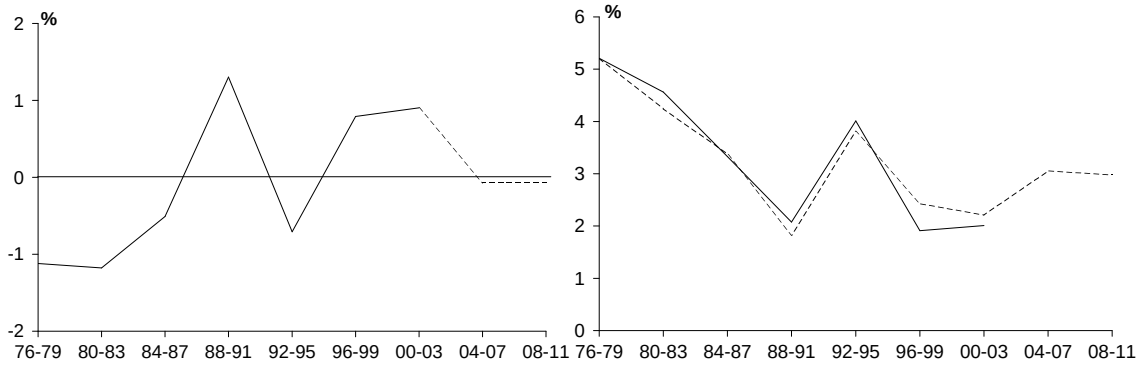
Countries in continental Europe saw the growth rate of labour productivity fall. At the same time these countries saw (the growth of) the capital-labour ratio decline. In France and Spain a lower contribution of capital explained the growth slowdown completely, in Germany and Italy for a significant part.

The second step relates fluctuations in capital deepening to fluctuations in employment growth. Figure 2.8 shows the four-year averages of the growth in total working hours (left panel) and in the capital-labour ratio (right panel)[8]. A quick look already reveals that capital-deepening is weak in periods of high employment growth (like in 1988-1991 and 1996-2003). This apparent relationship is confirmed by a panel regression for 16 OECD countries in the period 1970-2003, where we regressed the pace of capital deepening on the growth of employment (measured as total hours worked). The dotted line in Figure 2.8 reveals that the explanatory power of this regression is very high: a very large part of fluctuations in capital deepening is induced by fluctuations in employment growth. This implies that the slowdown in productivity growth, insofar it stems from a slower pace in capital deepening, is temporary. It is the flip side of a strong increase in employment growth. Would employment growth in the near

[8] Figure 2.7 shows the composite of 9 European economies: Belgium, Denmark, Spain, France, Germany, Italy, the Netherlands, Sweden and the UK. The panel of 16 OECD countries includes in addition Australia, Canada, Finland, Japan, Norway, New Zealand and the US. Data source: Economic Outlook (2004).

future, say in 2004-2011, return to its average over 1970-2000, capital deepening is expected to recover. This is indicated by the dotted lines in both panels for 2004-2011.

Figure 2.8 Growth of total hours worked and the capital-labour ratio in Europe[a]



[a] The left panel shows the growth (4 year average) of total hours worked including a projection for 2011; the right panel shows capital deepening (4 year average, straight line) , the fit from a panel regression and a forecast based on the same regression and the projection for employment.

Capital deepening is, however, only part of productivity growth. For the other part – growth of total factor productivity (TFP) – a similar story does not hold: TFP growth hardly slowed down in the late nineties – the period of accelerating employment growth – but all the more in the early years of the 21st century. Indeed, a panel regression confirms that TFP growth and employment growth are hardly related, not even in the short run. TFP growth has its own dynamics, hardly related to fluctuations in employment growth.

The trade-off between employment and productivity growth (or capital deepening) applies to the short run but most likely not to the long run. Barro and Sala-i-Martin (1995) show for many OECD economies that¸ unlike population growth, the growth rates of real GDP per capita do not have a secular tendency to decline.[9] From a different angle, countries like France and the United Kingdom experienced similar productivity growth of nearly 2%, despite their diverging population growth (0.3% in France and 1.5% in the United Kingdom). Van Ark et al. (2004) show that over the past two centuries productivity and employment growth are positively related, though a trade-off clearly exists for one or two decades. Finally, EC (2004) uses a (SVAR) model for the European Union in which an employment shock has a negative but small impact on the level of labour productivity, but not on its long-run growth rate.

Summarising, high employment growth has contributed to the slowdown in productivity growth via a temporary reduction in capital intensity. It is unlikely, however, that a trade-off persists in the long run.

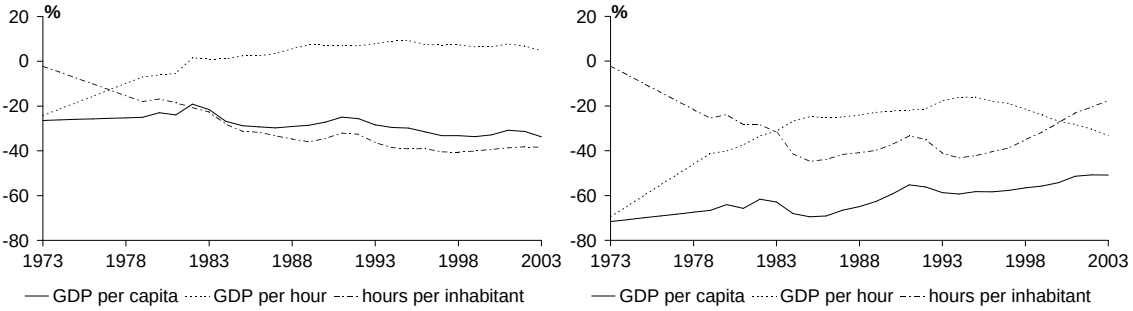
[9] Theoretical models are often silent about the relation between productivity and population growth. The latter has a positive, and not a negative, effect on economic growth in some models. In these models more researchers generate more knowledge, which is non-rival and contributes to the productivity of *each* worker (Jones, 2004).

Europe's potential for catching-up is exhausted

The high productivity growth rate in Europe after the Second World War derived partly from the possibility to learn from the leader in productivity, i.e. United States. By copying and adapting state-of-the-art technologies most of the European countries could augment productivity at a rather rapid pace. At the same time the possibility to learn from the United States diminished. This may explain the structural slowdown in productivity growth, at least for some countries.

France and Spain are illustrative of how European countries have caught up with the United States. Figure 2.9 shows the decomposition of GDP per capita – in deviation of the United States – into GDP per hour and hours per inhabitant. The figure shows that in the early seventies France and Spain needed to increase GDP per capita with 30% and 70% to draw level with the United States. In terms of GDP per hour France succeeded and Spain came halfway, but both lost ground in terms of hours per capita.

Figure 2.9 Catching up in France (left) and Spain (right): difference with the United States[a]



[a] Source: computations by De Groot et al. (2004) based on the GGDC (2004) dataset.

France is illustrative of several advanced countries in Europe, like Germany, Italy, the Netherlands, Belgium, Denmark and Austria. Until the eighties or nineties, these countries enjoyed high growth rates, catching up to the United States. This potential for catching up has been exhausted, as their GDP per hour has come at par with the productivity leader. They still lag behind in terms of GDP per capita. This does not reflect a gap in ability, but stems from a different choice between labour and leisure, see section 2.1.

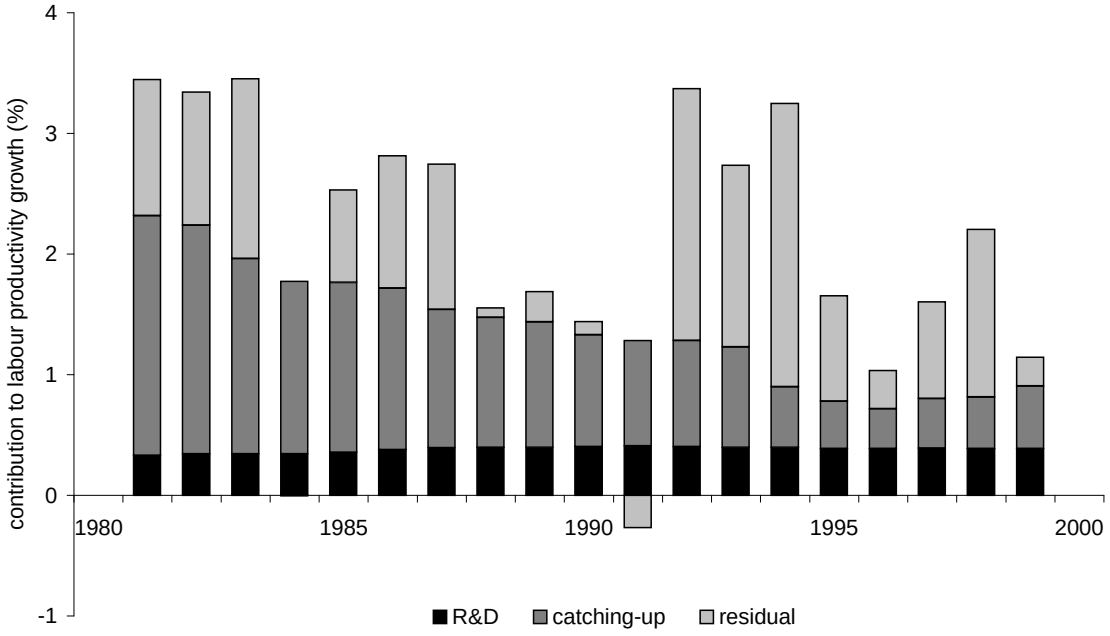
Spain is illustrative of a few lagging economies, like Greece and Portugal, with substantially larger productivity gaps.[10] Convergence in GDP per hour has been substantial until the seventies (Greece and Portugal) or eighties (Spain), but has stopped in the nineties. In Spain, it has turned into divergence since 1995. At the moment none of these countries converges to the United States, despite their productivity gap of 30% to 60%.

[10] Carvalho and Harvey (2004) apply a multivariate time series model and observe two possible convergence clubs in the Euro zone. The first club including France is at par with the US. The second club including Spain will remain almost 30% below the high group in terms of per capita income.

Intermediate positions are taken by the United Kingdom, Sweden and Finland, still lagging 10% to 20% behind. Remarkable outliers are Ireland and Luxembourg. Due to its specialisation in financial services, Luxembourg has a sky-high productivity level. Ireland has shown an extraordinary growth spurt. It has become at par with the United States, both in GDP per hour and per capita, despite the gap of 80% in 1970.

Productivity in level mainly West-European countries has come close to that in the United States. These countries operate at the technology frontier and do no longer have the 'advantage of backwardness'. Can gradually losing this potential of learning explain (part of) the European slowdown in productivity?

Figure 2.10 Catching-up is behind the productivity slowdown[a]



[a] Contribution of R&D and catching up to labour productivity growth in 7 European countries, see footnote 11.

To answer this, we have run a panel regression in which labour productivity growth is 'explained' by R&D expenditure and by the productivity gap with the United States.[11] The effect of the gap measures the advantage of backwardness. In Figure 2.10 the regression result is illustrated for an average of 7 EU member states. Labour productivity growth is attributed to

[11] A panel regression forms the basis for the decomposition of productivity growth into the impact of R&D and catching up, for 7 EU countries (Denmark, Finland, France, Italy, the Netherlands, Sweden and UK).The panel includes 12 OECD countries and 12 industries in 1981-1999. We regress the growth rate of value-added per hour in country *i* and industry *j* ($YH_{i,j}$) on the productivity gap with the United States (per sector), the growth rate in the United States (per sector) and the share of R&D expenditures (R/Y) and include a full set of industry & country dummies. The resulting equation is:

$$g\left(YH_{i,j}\right) = 0.15g\left(YH_{US,j}\right) + 0.07\left(YH_{US,j} - YH_{i,j}\right) + 0.31\left(R_{i,j}/Y_{i,j}\right) \qquad R^2 = 0.15$$

Following Griffith et al. (2000), we also included a cross-term (productivity-gap * R&D-share) measuring the decreasing return to R&D in sectors close to the productivity frontier, but this cross-term is insignificant.

R&D expenditure and to catching-up. The growth rate falls on average over years. Similarly, the catch-up effect becomes smaller over time, as the gap with the United States grows smaller. The effect is one and a half percentage point at the beginning of the sample period and only a half percentage point at the end. Catching-up is behind the structural slowdown in productivity.[12]

2.3.2 America's success: using ICT

The usual measures like access to internet or access through a broadband connection show that ICT has much more infiltrated economic life in the United States than it has in the European Union. Moreover, the technological breakthrough seems to have benefited especially American companies like Microsoft, Cisco and Dell a great deal. Indeed, ICT is behind America's success after 1995, and is often regarded a recipe for Europe's ailing productivity growth.

Table 2.1 Growth accounting decomposition of labour productivity growth[a]

	EU-4		United States	
	1979-1995	1995-2000	1979-1995	1995-2000
Labour-productivity growth	2.30	2.02	1.21	2.46
ICT producing sectors	0.44	0.65	0.51	0.89
ICT using sectors	0.62	0.59	0.36	1.43
Non-ICT sectors	1.21	0.83	0.48	0.23
Non-ICT capital	0.70	0.25	0.35	0.43
ICT producing sectors	0.08	0.03	0.05	0.06
ICT using sectors	0.18	– 0.03	0.12	0.10
Non-ICT sectors	0.44	0.25	0.17	0.26
ICT capital	0.33	0.53	0.46	0.86
ICT producing sectors	0.04	0.07	0.06	0.11
ICT using sectors	0.21	0.35	0.28	0.57
Non-ICT sectors	0.08	0.11	0.11	0.18
TFP growth	0.94	1.07	0.26	1.05
ICT producing sectors	0.30	0.53	0.35	0.71
ICT using sectors	0.17	0.19	– 0.15	0.68
Non-ICT sectors	0.48	0.35	0.06	– 0.34

[a] EU-4: France, Germany, the Netherlands and the United Kingdom.
Source: Inklaar, O'Mahony and Timmer (2003)

But, how important is the contribution of ICT to economic growth on either side of the Atlantic? First, ICT is more important in the United States than in the European Union, simply because the share of ICT capital is much higher (5.2% of GDP in the United States versus 3.3% of GDP in 4 EU countries).[13] The share reflects investment in ICT goods in past and present. It

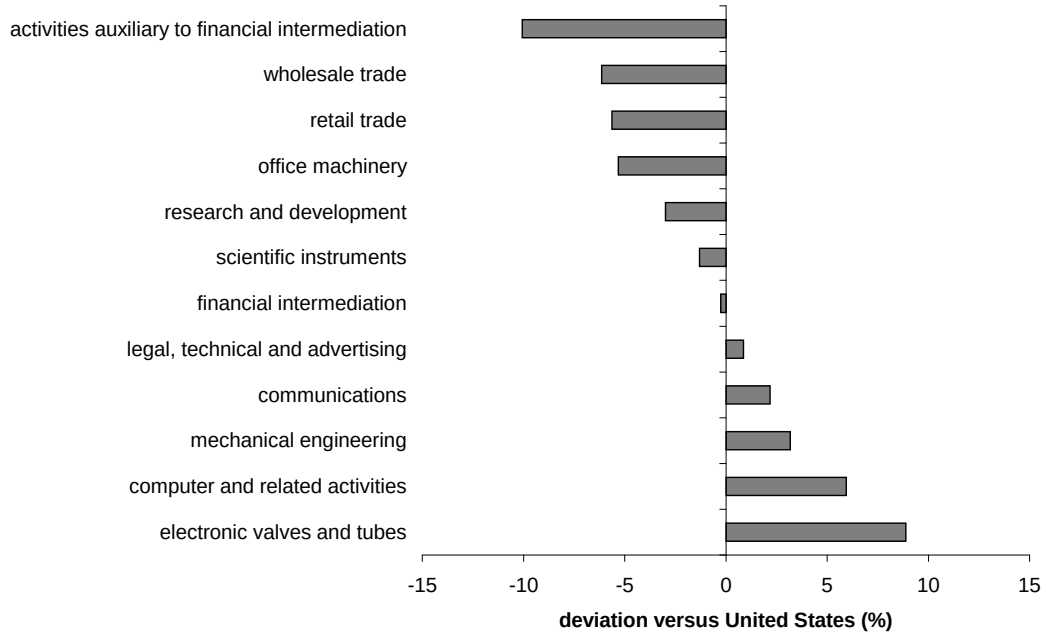
[12] Figure 2.9 also shows that R&D contributes to productivity growth, but not to its slowdown, see section 2.2.3.
[13] The ICT-decomposition of productivity growth is made by Inklaar et al. (2003) for four European countries (Germany, France, UK and the Netherlands) and the US.

has increased in the recent decades in Europe but much faster in the United States. The growth of ICT capital has contributed positively to the acceleration of productivity growth in both regions. This is shown by the contribution of ICT capital in Table 2.1.

Second, two elements in the contribution of ICT to economic growth can be distinguished, stemming from the production of ICT or from its use in other sectors. Table 2.1 shows that the ICT producing sectors of the economy (like electronic equipment and communications) have contributed to higher productivity growth in both the 4 European countries and the United States. Although productivity growth rates of more 10% are no exception, direct impact of these sectors on aggregate productivity growth is limited, given their relative size: 0.2 percentage points in the European countries and 0.4 percentage points in the United States. This does not exclude, however, the possibility of spillovers to other sectors.

The acceleration of productivity growth in the United States is concentrated in ICT using industries (like wholesale trade, retail trade and financial intermediation): TFP-growth in these service-sectors has been up to 5% in 1995-2000, about 3%-points higher than in the decades before (1979-1995). This contrasts sharply with the European experience in these sectors showing a modest TFP-growth of 1% both before and after 1995.

Figure 2.11 Growth differential of labour productivity for ICT-sectors between the EU-15 and the United States (1995-2001)[a]



[a] Source: O'Mahony and Van Ark (2003).

Does this evidence lead to the conclusion that ICT fully explains, not only the acceleration of productivity growth in the United States, but even the whole gap between the America's upswing and the European slowdown (Van Ark et al. 2003)? This conclusion is not clear-cut,

however. Several qualifications are in order. First, ICT related sectors in the United States are not uniformly outperforming their EU counterparts. Figure 2.11 shows the growth differential for selected ICT related sectors in the period 1995-2001. It clearly shows that labour productivity in some sectors has grown much faster in European Union than in the United States, especially in services like communication and computer services. However, three large sectors – wholesale trade, retail trade and (part of) financial intermediation – have grown relatively fast in the United States. These three sectors are able to account for almost all of the productivity growth difference between the two economic blocs. The question arises, which is the second qualification, how much of the growth spurt in these sectors is related to the introduction of ICT. Gordon (2004) points at the spatial component of productivity growth in the retail sector. The retail sector in the United States has grown fast by using ICT intensively *and* by concentrating retail in the sparse suburbs of large cities. Daveri (2004) points at the limited use of ICT in retail trade. He shows that the share of ICT capital in this sector is smaller than in the total economy. Leaving this sector out of the set of ICT using sectors, he shows that

Why has the United States benefited more from ICT than the European Union?

We distinguish between two aspects of ICT-related productivity growth, namely ICT investment and TFP growth in ICT-intensive industries. In this box, we survey some of the arguments, but are unable to give a conclusive answer.

ICT-investments are and have been higher in the United States than elsewhere. Inklaar et al. (2003) investigate whether this reflects a relative cost advantage, but the evidence is hardly supportive. It is also unlikely to be a matter of insufficient access to new technologies in the European Union, as the market for ICT goods and software is essentially global (Van Ark et al., 2003). An alternative explanation starts with the observation that ICT investments are relatively risky. Bartelsman and Hinloopen (2004) argue that the share of firms investigating in a risky technology increases as competitive pressure becomes more intense and as firms are able to flexibly adjust complementary production factors like labour. In a panel for 13 OECD countries, they show that employment protection legislation (EPL) in particular, but also various measures of product market regulations, significantly reduce the share of ICT investment in total investment. Van Ark et al. (2003) also point to structural impediments in product and labour markets hampering the ICT adoption in Europe. They quote recent research for U.S. retail trade, which has shown that entry of high-productive firms and exit of low-productive firms is responsible for almost all of labour productivity growth in this sector.

TFP-growth in ICT-using industries has been relatively high in the United States since 1995. The success-story of retail trade in the United States suggests that conditions like the scale and geography of the economy might determine the return to ICT adoption. Alternatively, Jovanovic and Rousseau (2005) argue that the adoption of a general-purpose technology like ICT in recent years or electronics in the late 19th century requires a lengthy learning process, resulting in temporary lower productivity growth preceding the boom. The United States has gone through this learning process in the eighties and early nineties; many European countries are still in it. An important aspect of this learning process is the implementation of ICT through experimentation and innovation. Pilat (2004,p52) argues that “without this process of “co-invention”, which often has a slower pace than technological invention, the economic impact of ICT may be limited”. Van Ark et al. (2001) concludes that “(..) one must be careful not to embrace a simple story that is based only on excessive European regulation. The more rapid take-off of wireless technology in Europe suggests that some regulation, for example, setting standards can be productivity enhancing as well.”

ICT use explains only 55% instead of 90% of the US acceleration, and 40% instead of 60% of the productivity gap between the United States and the European Union.

Within Europe, the differences in impact of ICT across member states are huge and depend highly on the sources of growth (capital deepening or total factor productivity growth) and types of industries (ICT producers versus ICT users). The share of ICT capital in Sweden and Finland comes close to the American rate of 6% of GDP, about twice as high as in Germany and Spain (Timmer et al. 2003). A different pattern, and again wide variation, can be observed in productivity growth of ICT producing industries: it has accelerated strongly in Germany and Finland, but slowed down in Sweden. This contrasts with productivity growth in ICT using industries, showing an acceleration in Sweden, but a downturn in Italy (Daveri, 2004).
The differences across countries, including European success stories, and the high growth rates of many ICT sectors in Europe, make one point clear: Europe has not missed the ICT train completely (cf. Gordon, 2004). Some countries and several sectors have been able to produce or adopt ICT successfully. Why shouldn't other sectors and other countries be able to copy this? In other words, ICT is a potential source for Europe to raise its productivity growth. It has been unable to overcome the productivity slowdown in the past, but might be an opportunity for acceleration in the future.

2.3.3 Growth to come: investment in knowledge and technology

The poor productivity growth is often seen as evidence that the European Union and its member states lack the ability to innovate. Lacking, the reasoning goes further, is investment in knowledge. Europe spends less on R&D than the United States. Europe spends less on (tertiary) education than the United States. Investment in knowledge is the key to come up with new ideas and to find ways to implement these ideas; it is the key to innovation.

We agree that investment in knowledge, via education and R&D, is beneficial for economic growth. We do not dismiss the thesis that more investment in knowledge will boost European productivity growth, as Barroso, Kok and Sapir put forward. This does not imply, however, that lack of investments explains the productivity slowdown in Europe. Neither investments in R&D nor in education have declined. As such, they did not contribute to the productivity slowdown. It might be, however, that the current shares of R&D and education have been sufficient in the past for the adoption of technology, but inadequate for future innovations.

Research and development

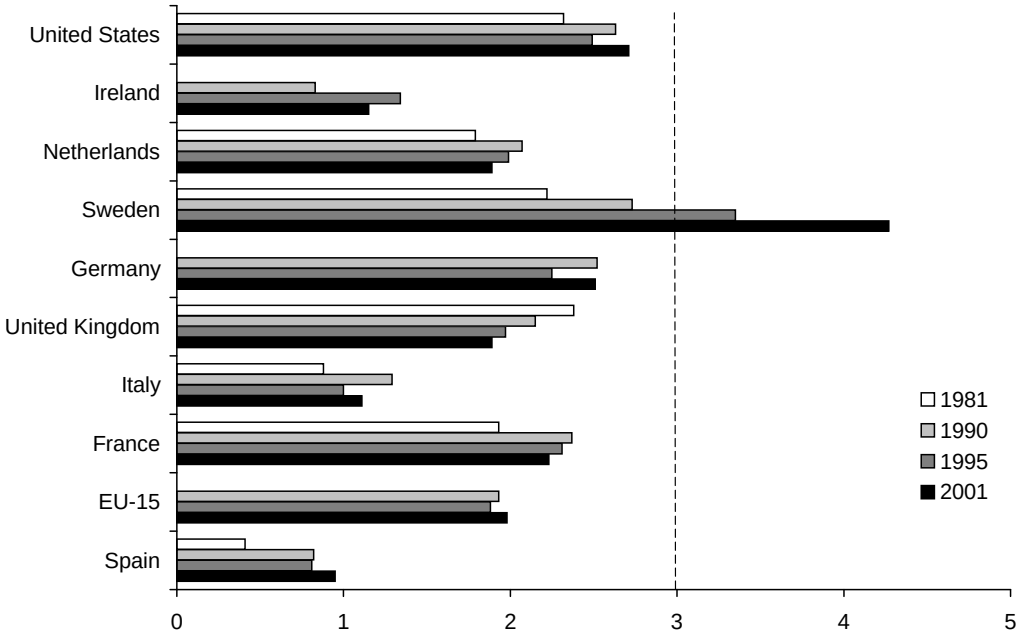
R&D is important for discovering new products and production methods. In their brief survey of the literature Jones and Williams (1998) conclude that the social return to R&D is likely to exceed 25%. Given that a normal rate of return on investment is often set equal to 10%, this is high. Positive externalities explain that the return on R&D is higher than normal: investment by one firm increases not only productivity of that firm but also of other firms, within or outside the same sector and within or outside the same country. The large difference in return prompts

Jones and Williams to conclude that the United States should spend more on R&D. In fact, much more: they claim that the United States should quadruple its expenditure. From this perspective the Lisbon target that the European Union should increase R&D expenditure from roughly 2% to 3%, does not even seem ambitious.

R&D contributes to growth, but is it also part of the story behind the productivity slowdown in Europe, or the acceleration in the United States? To start with the latter, Figure 2.11 shows that the United States has slightly risen, but no more than slightly, their R&D expenditures. For any reasonable estimate of the return on R&D, this increase has only marginally contributed to the productivity acceleration in the United States. Moreover, a large role for R&D is in conflict with the observation that the R&D-intensity is quite low in successful ICT using service sectors, like wholesale and retail trade.

With the exception of Sweden and Finland, in European economies expenditures on R&D have been stable. In Sweden and Finland, higher R&D investments are likely to have contributed to an acceleration of productivity growth; in other countries, however, a change in R&D has not occurred, and cannot therefore explain the change in productivity growth. The total contribution to productivity growth depends not only on R&D expenditures but also on the return on these expenditures. This return may have declined since European economies have shifted towards the technology frontier. R&D to absorb state-of-the-art technologies becomes less important when fewer technologies are left to absorb. But this line of reasoning is not essentially different from that in the previous section, where we argued that potential for catching up is exhausted and that this is a structural reason for the productivity slowdown.

Figure 2.12 R&D expenditures (% of gross domestic product)[a]



[a] Source Eurostat.

Where do these differences in R&D expenditures stem from? Bottazzi (2004) shows that country-level variations in R&D expenditures cannot be explained by differences in sector compositions. Low R&D expenditures at the national level reflect low expenditures within each sector. Unfortunately, little is known about the determinants of R&D expenditures within countries, sectors or firms. Several explanations are put forth in the literature to explain variations in these R&D expenditures. First, a recent paper by Bloom et al. (2002) shows that the user costs of R&D are a significant determinant of R&D expenditures, and likely explain part of the cross-country variation. They show that countries with low tax burdens on R&D, i.e. with low corporate taxes and substantial R&D tax credits, tend to have higher R&D shares. Second, not only costs, but also revenues are a likely determinant of R&D expenditures. These returns are likely to be higher for countries able to learn from the productivity leader. In other words, catching-up reduces the return to R&D (Acemoglu et al. 2004). Third, both private firms and governments invest in R&D. It could be that public R&D stimulates firms to raise their private expenditures by reducing marginal costs. Alternatively, it is also possible that public R&D makes private expenditures redundant, as new technologies are invented anyway. Unfortunately, the empirical literature does not give a clear answer whether public R&D raises or reduces private expenditures, as Garcia-Quevedo (2004) concludes from an extensive meta-analysis[14]. Finally, differences in regulations or in the scale of the economy might affect the R&D intensity, but again it is yet unsettled how. It is even unclear whether univocal conclusions will ever be reached, as different types of R&D in different sectors have to deal with specific sources of market failures (Martin and Scott, 2000).

Looking backward, R&D cannot explain the productivity slowdown in Europe: if anything R&D expenditures have increased. Looking forward, the empirical literature supports the idea that a higher R&D intensity raises productivity growth, but is less conclusive about how expenditures can be raised.

Education

An educated population is a prerequisite for high income per worker. This statement undoubtedly holds at the global level, comparing western economies with developing countries. Sala-i-Martin et al. (2004) show in a world-wide cross-section that primary schooling is among the most important determinants of economic growth in the post-1960 period. Focusing on advanced economies, it is less obvious whether education is a critical factor behind productivity differences. Does education, possibly of a particular type, matter for economic growth in Europe and the United States? If so, has it contributed to the productivity slowdown?

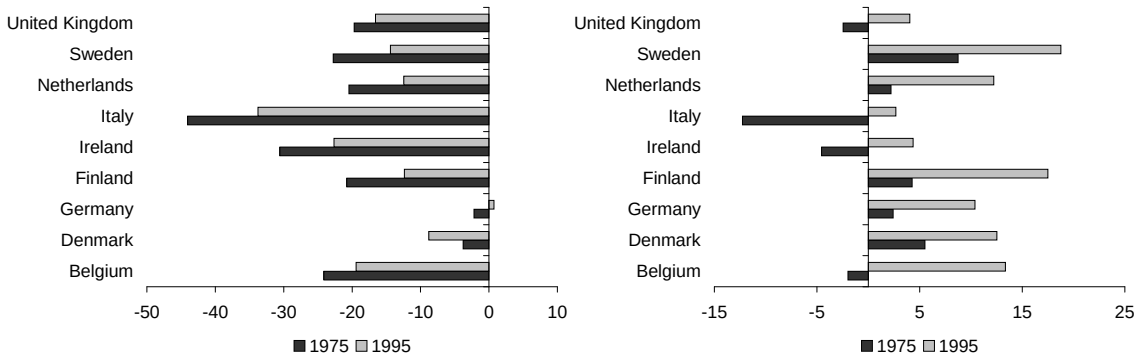
Intuitively, education matters for growth or at least for the level of productivity. Do empirical studies confirm this intuition? The economic literature does not provide unequivocal evidence for the impact of education on productivity growth. Yet, both De la Fuente and

[14] A meta-analysis can be briefly defined as a quantitative survey of the literature, taking differences in data sources or estimation methods into account.

Domenech (2002) and Krueger and Lindahl (2001) emphasise that the contribution of investment in education to productivity growth is sizable, once education is correctly measured.

Might education also be a reason behind the productivity slowdown? It might be if the growth rate of human capital have slowed down. Unfortunately, observations for the recent decades are scarce. The picture for the period up to 1995, in figure 2.13, gives little indications of a European slowdown in education. First, European countries lag behind the United States in terms of its expenditures on education (as a share of GDP), but they are catching up. Second, Europeans have had better scores than Americans on an internationally comparable literacy test – measuring both language and math skills – already in 1975, but even more so in 1995.

Figure 2.13 Schooling years and literacy in 1975 and 1995 (percentage deviation of the United States)[a]



[a] Schooling years (left panel) are OECD figures, as summarised by De la Fuente and Domenech (2001); Literacy of the working-age population (right panel) is taken from the 1994 International Adult Literacy Survey (IALS).

Summarising, educational attainment did not slow down in recent years (or even decades) in Europe. Therefore, the productivity slowdown does not follow from reductions in education expenditures or performance.

R&D and education in combination with ICT

The fall in productivity growth rates in Europe cannot follow from a decrease in investments in R&D, education or ICT. The latter is, however, identified as the engine of the accelerating productivity growth in the United States. Does the Europe benefit too little from ICT because the level of investment in R&D and education is too low?

Griffith et al. (2003) point out that R&D has two sides. Investment in R&D is not only essential for the introduction of new technologies but is also conducive to the absorption of existing technologies. They show for a panel of 13 advanced OECD economies that this latter effect of R&D is stronger in less advanced economies, since for them there are more existing technologies to absorb. For countries at or near the productivity frontier, the possibilities of absorption are exhausted, or at least diminished. They have to come up with new technologies, like ICT. Is it a coincidence that R&D-intensive countries - like the United States, Sweden and Finland (see figure 2.11) have been successful in ICT-production and adoption?

Similarly, the fact that education sec has not contributed to the productivity slowdown, does not dismiss the possibility that a highly educated population is essential in the transformation of European economies from technology-adapting to inventing economies, cf. Sapir et al. (2003). The empirical evidence on this topic is inconclusive. Krueger and Lindahl (2001) conclude that "(T)he positive effect of the initial level of education on growth seems to be a phenomenon that is confined to low-productivity countries." This view is challenged by a recent study of Vandenbussche et al. (2004), who find that skilled human capital (i.e. a highly educated population) statistically matters for technological progress in the advanced OECD economies. Tertiary education in particular is good for growth in these countries. Being at or close to the productivity frontier, these countries are less able to adopt technology from more advanced economies, so they have to invent new technologies or production methods themselves. This requires an educated population.[15] If tertiary education mattered, the United States would have a lead: its share of workers with a tertiary degree has increased from 30% to 38% of the working-age population in recent years (1991-2002).[16] Only a few European countries like the United Kingdom have been able to mimic this growth spurt, though at a lower level (from 16 to 27%). In other countries, like Germany, the gap with the United States has widened. Most European countries, however, have shown a significant increase in the share of the working-age population with a upper-secondary degree in recent years (1991-2002), which contrasts with the United States, where this share declined from 54 to 49% (OECD, 2004, p72-73).

Summarising, large R&D expenditures and a highly educated population may have contributed to the successful development and implementation of ICT in the United States, Sweden and Finland, and might be a prerequisite for innovation of new technologies in the future.[17]

2.3.4 Conclusions

Pessimism about the performance of European economies seems exaggerated. In many economies the level of productivity is high. The growth rate of productivity shows a decline, but this a logical consequence of success. First, employment growth in the late nineties has been much higher than in the early nineties by historical standards (although it has not been high enough to reach the Lisbon targets for participation). As a result, less capital goods have been available per worker, leading to a fall in labour productivity growth. As such, this fall in productivity growth between the early and the late nineties is temporary. Second, many European countries have caught up with the United States. As a result, the potential for catching-up – by imitating and adapting state-of-the-art technologies and products – has become exhausted. This largely explains the downward trend in European productivity growth over a longer period than the nineties. It implies that Europe will not return to its historically

[15] In contrast, economically successful adoption of technologies by less advanced economies requires a substantial amount of lower-skilled labour.

[16] Source: OECD (2004), Education at Glance, p72-73.

[17] Future CPB research will investigate these issues further.

high productivity levels, but should be able to mimic productivity growth in other frontier economies like the United States.

At the same time that the European Union saw a sharp decline in productivity growth, the growth rate in the United States stepped up. The American economy has benefited from the ICT revolution more than European economies on average. Mainly the introduction ICT technologies in services like retail and wholesale trade has contributed to the growth spurt. These service sectors are not known for their spending on R&D.

More generally, there are not many indications that Europe's slowdown or America's acceleration are related to changes in investment in R&D or in education. On both sides of the Atlantic R&D expenditures have been a stable fraction of GDP over the years. A change in education is also not an obvious candidate to explain the slowdown in Europe and acceleration in America. Over the years average schooling years and average test scores have improved in Europe much faster than in America.

The fact that education, R&D and ICT do not explain the productivity slowdown in the past does not dismiss the opportunity they might offer for future productivity growth in Europe.

2.4 Conclusions

Looking backward, the European economies score well on some aspects of economic performance. First, participation on the European labour market has on average increased, although the rates of participation remain rather low in the largest EU member states. Second, the level of productivity is high by international standards. That its growth rate has fallen over time, especially in the late nineties and ever since the seventies, is partly the consequence of economic successes. The fall in the late nineties is related to surge in participation in that period. The decrease since the seventies is related to pas growth: many European economies have caught up with the United States in terms of productivity.

The European slowdown does not follow from decreasing investment in R&D, education or ICT. The possibility is that investment in knowledge may not have been enough to fully exploit the opportunities from ICT. The evidence for this possibility is scarce as well as mixed.

In this chapter we have focused on the proximate causes of productivity: investments in R&D, education and ICT. We left out the deeper causes, like institutions, regulations and preferences, without wanting to suggest in any way that they are unimportant for economic growth. On the contrary, removing international barriers to trade in goods and productive factors could be one of the spearheads of European policy. Similarly, we have largely ignored the determinants of employment growth, but only pointed at the likely role of the welfare state. Questions why participation rates went up or why Europeans work shorter hours than Americans are either investigated in other CPB-studies, like CPB and SCP (2003), or will be object of future research.

3 Open method of coordination: too much and too little

3.1 Introduction

In Lisbon the head of states formulated a common ambition for the member states of the European Union. To fulfil the common ambition, a common approach seemed logical. However, it was easier to agree on a formulation of the ambition – which country did not want to see an increase in production without deteriorating the environment and without breaking up social cohesion? – than it was to reach consensus on an approach. It was clear to everyone that politically sensitive reforms in their pension systems and labour market were needed to become more 'competitive'. However, the opinions differed strongly on the exact changes.

Indeed, there is the wide variety in the ways welfare states are organised in Europe. A single European model does not exist. A common way to categorise the European welfare states originates from Esping-Andersen, who originally has distinguished three types of welfare states in Europe: the liberal, the social-democratic and the corporatist welfare state. Later the Mediterranean welfare state type has been added. A discussion on these different types can be found in CPB and SCP (2003).

The problem for the European Union was to agree upon reforms without favouring one type of welfare state over the other. The solution for this problem was a method of governance, with which the European Union and its member states had already experience. Since 1997, it was used for coordinating employment policies. Not until the Lisbon summit of March 2000, this governance method was given its name, the Open Method of Coordination (OMC). This method brackets political conflict as it does not impose a single, European vision on the ideal welfare state design or other policy areas. Instead, it was positioned as a 'means of spreading best practices and achieving greater convergence towards the main EU goals' (European Council, 2000). In other words, Lisbon was not 'day one' of the new method but tried to bring together existing, scattered policy practices in a new discourse, open to everyone with an interest in (improving) these practices.[18]

There is a wide range of different forms of governance in use in the European Union. These can be distinguished by a number of institutional choices, like the focus on a national or a European policy and the actors involved (see WRR, 2003, for an extensive treatment of the different governance forms). The OMC is a combination of national policy and informal European coordination, where decisions are based on consensus. Specifically and according to the Conclusions of the European Council in Lisbon March 2000, it involves:

[18] Whether OMC is a new mode of governance has since been subject to a lively debate in the literature. Radaelli (2003) for instance argues that OMC is a new governance architecture. However, the SER (2004) concludes that it is questionable whether the OMC even is a policy instrument. Although the method is part of the EU arrangements, the ways to enforce compliance are limited at best. Furthermore, no competences are formally delegated to the EU level, i.e. the European Commission and European Parliament play only a minor role.

- ‘Fixing guidelines for the Union combined with specific timetables for achieving the goals which they set in the short, medium and long terms;
- Establishing, where appropriate, quantitative and qualitative indicators and benchmarks against the best in the world and tailored to the needs of different member states as a means of comparing best practice;
- Translating these European guidelines into national and/or regional policies by setting specific targets and adopting measures, taking into account national and regional differences;
- Periodic monitoring, evaluation, and peer review takes place, organised as mutual learning processes.’

Clear is that the OMC does not want to impose one, single standard on all member states, but takes into account the diversity among them. It is a ‘third way’ between laissez faire and coordination.

That the OMC accommodates diversity among member states, has allowed it to spread to new areas. Currently, the method is employed for coordination of general economic policy (by means of the Broad Economic Policy Guidelines), in the European Employment Strategy and for the coordination of policies on social inclusion, innovation, education, pension systems, etcetera.

The OMC is the subject of much discussion and controversy. There are two basic complaints. Some find it not accommodating diversity enough, whereas others think it is too accommodating. These objections seem to exclude each other, but we will argue that both make sense.

The first objection is a reaction to the development that the European Union, through the OMC, gets involved in more and more areas. The general idea behind this development is that many aspects of economic policy in one member state have an effect on economic welfare in other member states. This idea appears in different forms. In its strongest form, the common goal to become more competitive cannot be achieved unless all or, at least, the largest member states pursue reforms simultaneously. The objection is that the idea of interdependency is inappropriately generalised: it may apply to some aspects of economic policy but not to all. Section 3.2 will show that this objection is valid. Even for a central aspect in the renewed Lisbon strategy – jobs – the international interdependencies are limited.

The second objection is that the OCM is too permissive in situations where spillovers are important. The member states seem to agree, for example, that investments in research and development need to be increased. At the same time, in previous years these investments have been rather stable fractions of production. This is just one of many examples. Structural changes to the European economies take place only slowly or do not seem to take place at all. Since the member states are responsible for implementing these changes, the objection is that they do not deliver. One can agree with Barroso when he concludes: “Delivery is the Achilles heel of the

Lisbon strategy" (Barroso, 2005, page 30). This problem is now fully recognised by the European Commission, and is one of the driving forces behind the new proposals for revitalising the Lisbon process. One proposal is to make national action programmes, drawn up by the national governments and discussed with the national parliaments. This should avoid that member states postpone the implementation of difficult changes to their economy and rather wait for other member states to take action.

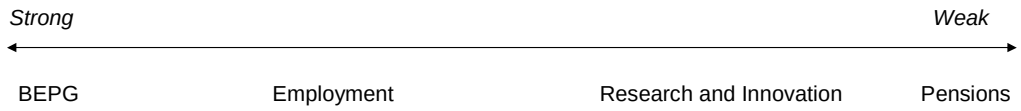
Section 3.3 will go deeper into the functions of the OMC. The analysis of the functions lead us to the conclusion that the OMC has flaws. Unfortunately, national action programmes are not likely to repair them. What is needed are differential approaches to jobs and to growth. Whether these approaches are part of a renewed OMC or not, is of secondary importance.

3.2 The European role in stimulating jobs and growth

Introduction

One could say that *the* OMC does not exist. There seem to be as many types of OMCs as there are policy areas. For this reason, Zeitlin (2004) characterises it as an 'Unidentified Political Object'. Figure 3.1 (adapted from Borrás and Greve, 2004) illustrates the diversity of OMC modes by placing them for a number of different policy areas on a continuum from 'strong' to 'weak' coordination.

Figure 3.1 The relative degree of coordination of the OMC in different policy areas



The ranking is based on the following three criteria. The first and most important criterion is the possibility of sanctions. Sanctions are informal in the OMC and derive from peer pressure and public opinion. Peer pressure is operative in the Broad Economic Policy Guidelines (BEPG), but it is virtually absent in the area of pensions, where only national strategy reports have a similar function. A second criterion to define the 'strength' of the mode of OMC is the determinacy of the common guidelines. All policy areas combine qualitative and quantitative guidelines; however, there are large differences across policy areas as to how precise and demanding these are. In the BEPG there are for instance clear guidelines, whereas for pensions there are only broad objectives. A third and final criterion is the clarity regarding the roles of different actors, in particular in the peer review. The Lisbon declaration enumerates the different elements of the OMC procedure. However, the document is written in rather general terms and does not provide all-encompassing and clear-cut procedures. Therefore, in the absence of juridical predetermined procedures, the new method has unfolded in different ways, with different results as to the clarity of institutional actors' roles.

Figure 3.1 shows that the 'strength' of the OMC is different from area to area. The degree of coordination is considered to be relatively weak in the area of pensions systems. The Broad Economic Policy Guidelines provide the relatively strongest restrictions on the member states, although they retain the liberty to ignore these guidelines when making economic policy. Indeed, when compared to the Community method, where the Union is able to enforce agreements, the degree of coordination through the OMC is rather weak.

That the OMC has developed differently in various policy areas, fits well with the principle of subsidiarity. According to this principle, that is central in the Constitution for Europe[19], competences remain with the member states unless there are good reasons to coordinate the action of the member states at the European level. This principle implies indeed that the degree of coordination has to be different in different areas. But, taking this one step further, the question arises whether European interference with national policies is for some areas even necessary. We take up this question for the two areas that are central in the renewed Lisbon agenda: jobs and growth. The answer starts with explication of the subsidiarity principle.

The subsidiarity principle

Within the European Union the allocation of competences between the community of member states and the member states themselves is subject to the subsidiarity principle. Competences remain exclusively with the member states unless there are good reasons for some form of European coordination or centralisation.

The subsidiarity principle is, however, in itself neutral about the direction to take: decentralisation or centralisation. There are two good reasons to assign competences to the most decentralised, in this case national level of decision making. First, the distance between decision makers and voters is relatively small. This is important for making decision makers accountable for their actions. Local environmental problems should preferably be handled locally. Second, decision makers can relatively easily incorporate in their actions country-specific preferences or institutions, as for instance prevalent on the labour market. Country-specific policies might be preferable over a unifying as well as restrictive framework.

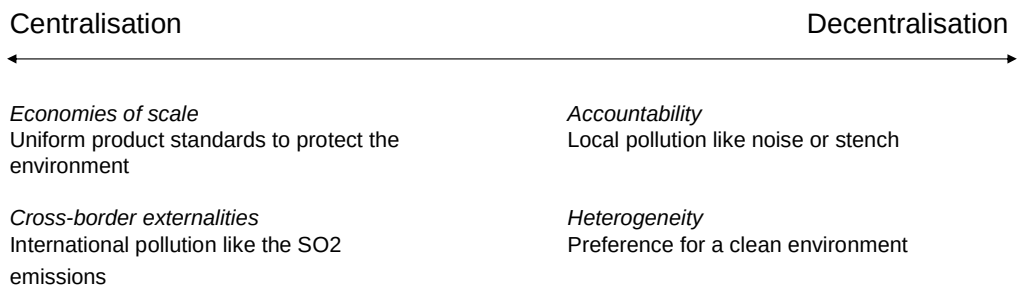
Similarly, there are two good reasons for delegating powers to the European level or for sharing powers between the community and its member states. The first derives from cross-border externalities. A policy change in one member states may have positive (R&D) or negative (pollution) effects on other member states. The second reason derives from economies of scale. It is for example an important reason behind the harmonisation or mutual recognition

[19] Article 1-11 of the Constitution says: "Under the principle of subsidiarity, in areas which do not fall within its exclusive competence, the Union shall act only if and insofar as the objectives of the proposed action cannot be sufficiently achieved by the Member States, either at central level or at regional and local level, but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level."

of standards: firms do not need to comply with many different standards but rather with only one.

Figure 3.2 shows both reasons for decentralisation and for centralisation. An objective analysis of each pro or con is possible, but weighting the pros and the cons remains ultimately a political choice. The form of centralisation is important for this choice. Centralisation must be just enough to reap the gains from coordinated action but not more than that. This principle of proportionality supplements the principle of subsidiarity.

Figure 3.2 The subsidiarity test



Economies of scale are not usually put forward as argument for the European involvement in national policies to stimulate jobs and growth. This does not rule out the possibility that for some specific policy instrument economies of scale are relevant. The European patent system is a clear example of that.

European involvement is generally defended on the grounds of cross-border externalities. Although explicit references to cross-border externalities are not standard among policy and opinion makers, they are implicit in the formulation of the Lisbon strategy: more common than referring to externalities is to argue that together the European countries are stronger than on their own. This idea is not only applied to international relations but also to their economies. The Kok report for instance states: '*… a jointly created economic tide would be even more powerful in its capacity to lift every European boat*', as if each member state has a stake in the success of the others. That, apart from good neighbourhood or the grand ideal of a European family, makes that a member state takes monitoring of others' efforts seriously and that it tolerates monitoring by others of its own efforts.

The stake in economic success elsewhere is assumed to be large. One would like to know, rather than assume, how large this stake actually is. To gauge this we need to distinguish between both sources of economic growth: employment and productivity.

Employment growth

In a variety of ways employment growth in one country has an impact on other (neighbouring) countries. First, the country with employment growth sees its production and income increase and will demand more goods and services from the other countries. Through export growth the

other countries benefit from employment growth in one country. This mechanism is valid in the short run, specifically if there is slack capacity. Gros and Hobza (2001) look at the short-run cross-border effects of fiscal expansion in Germany, based on simulations with different macro-econometric models. The overview of simulation results learns that the effects are small or often even negative. A negative effect may arise when a German expansion retriggers an interest rate increase in the Euro area. Second, imbalances on labour markets could be resolved by an in- or outflow of workers. SER (2001) shows, however, that in the short run the net flow is small, in particular between European countries: a member state with a low unemployment rate attracts more immigrants, not from other member states but from outside the Union. For the long run, there is little evidence that employment rates depend significantly on migration flows. The (un)employment rate is structurally determined by country-specific institutions (see Nickell et al., 2005, and the rich literature on structural unemployment).

To identify other structural spillovers from employment growth, we resort to simulations with the general-equilibrium model WorldScan. Important is that the model considers only long-run effects of changes in policy or in the economic environment, by assuming that labour- and product markets are in equilibrium, both in the initial situation and after the changes have been completed. The model captures two relevant cross-border effects, one positive and the other negative. The positive effect works through the terms of trade. Higher employment in one country raises the export demand for others. In the short run, this could spur production, using slack capacity, and reduce unemployment. In the long run, higher export demand will be accommodated by higher export prices, as slack capacity is not structural. Higher employment in one country therefore benefits others through terms-of-trade gains. The negative spillover works through the (rental) price of capital. A member state will see capital leave and the investment rate fall temporarily, when economic success elsewhere brings an increase in the return on capital. This will have a negative effect on productive capacity in the future.

The simulations assume that in Germany employment increases with 10% and show the effects on other European countries. Table 3.1 shows the simulation results. The impact on real income in Germany is less than 10%, implying lower real income per worker. To sell more German products abroad, producers need to lower their export prices. Likewise, the increase in the German demand for foreign products will lead to an increase in the import prices. Cheaper exports and more expensive imports: Germany sees its terms of trade fall. This is the main reason that real income increases with less than employment.

The change in the terms of trade is an income loss for Germany but an income gain for the other European countries. Other countries share in the German success through the terms-of-trade improvement. Since the effect on capital costs is smaller, these countries benefit on net from an expansion in German employment. More importantly, the spillovers of employment growth are rather small. The income gain is only 1% to 3% of the income gain for Germany (the first column in Table 3.1). Put differently, 1 Euro extra income in Germany leads to less

than Euro cent extra income in the countries and regions in Europe. These effects cannot be characterised as a rising tide, but rather as a drop in the ocean.

Crucial as well as plausible assumption is that the rate of employment in one country does not have a direct effect on structural rate of participation and unemployment elsewhere. As long as this holds, a member state can expect far more from increasing its own employment rate than from higher employment in other member states.

One could argue that more employment will also trigger more investments in innovation and technical change. These investments could have important spillovers on neighbouring economies. But of course, there are other, more direct ways than increasing employment to boost innovation and technical change. European efforts to increase innovation could better focus on these ways than on employment.

Table 3.1 The effects in Europe from an employment increase in Germany, change as a result of the 10% increase in employment

	Real national income Percentage change	Absolute change (Germany = 100)	Terms of trade Percentage change
Germany	9.04	100.00	– 1.55
France	0.12	0.92	0.23
Italy	0.12	0.62	0.20
United Kingdom	0.09	0.71	0.19
Spain	0.10	0.36	0.21
Netherlands	0.18	0.49	0.12
Belgium	0.27	0.47	0.20
Eastern Europe	0.28	0.90	0.29

Source: simulations with WorldScan

Productivity growth

Investments in better products and production methods are important for the levels and growth rates of productivity. Typically, they involve externalities, i.e. investments by one firm increase the production possibilities of other firms. The reason is that knowledge of products and production methods resembles a public good. Its use is non-rival and is – to some extent – non-excludable.

The spillovers of knowledge investments are international. Investments in one country have an impact on the productivity of other countries. Empirical work linking these two is large (see for an overview Keller, 2004). In particular, R&D investments are found to have important external effects on productivity outside the country in which the investments occur.

Knowledge is, however, not a global public good. Distance matters for the transfer of new technologies. The effect of knowledge investment on productivity becomes smaller, the farther a country is from the place of investment. Table 3.2, based on Keller (2002), shows that R&D in the United States contributes much less to total factor productivity in small European

economies like Finland, Italy and the Netherlands, than German, French or British R&D, even though the US expenditures are more than six times larger. Keller's estimates imply that for every 1200 kilometres the effect of R&D investments is reduced by a half. He also finds support for the popular notion that world has become smaller: in the late 70s the decay with distance was larger than in early 90s. But, even in 90s distance is far from dead.

Table 3.2 European R&D is important for domestic productivity (TFP), percentage change in TFP due to a 10% increase in R&D-expenditures

	Finland	Italy	Netherlands
Domestic	0.01	0.06	0.03
France	0.11	0.12	0.11
Germany	0.17	0.16	0.16
United Kingdom	0.16	0.15	0.17
Japan	0.01	0.00	0.00
United States	0.08	0.05	0.06
Aggregate	0.53	0.53	0.53

Source: own calculations based on Keller (2002).

There are at least two reasons for the strong effect of distance on knowledge transfer, depending on the form of the spillover. It could be that firms learn from observing the technologies that other firms employ. In this way investment in new products and production methods by one firm enhances the production possibilities of other firms directly: a pure knowledge spillover. New communication technologies have made learning at a distance easier. Nevertheless, face-to-face contact remains important, since knowledge about these products and production methods is at least partly tacit. Distance matters for bringing people together. It could also be that know-how is embodied in intermediate goods and services and in capital goods. Investment by one firm enhances the production possibilities of other firms indirectly, through the use of these goods and services: a pure rent spillover. Distance matter for international trade in goods and services. A rule of thumb, the trade volume between a pair of countries reduces by a half when the distance between them doubles. Since the technical progress is concentrated in the production of tradables, i.e. primary products, manufacturing goods and some services like communication, the rent spillover across countries is economically important.

In short, spillovers from knowledge investment are international but are confined to neighbouring countries. This seems to make the European Union well suited to coordinate and even perhaps to implement measures to stimulate knowledge investments. It seems likely that each member states has a stake in the success with which other member states stimulate investments in new products and production methods.

Conclusion

The OMC has expanded to different policy areas. This expansion is defended by the mutual interest in national economic policies. Central in this defence are cross-border externalities. The assumption of cross-border externalities seems reasonable for policies to raise growth by stimulating productivity enhancing investments in know-how and technology. A typical characteristic of these investments is that others than the investor also benefit from them, either by acquiring new knowledge or through lower prices. The assumption of cross-border externalities is, however, dubious for policies that stimulate jobs. Once a member state is in a state of full employment or cannot lower the structural unemployment further, it cannot benefit from more jobs in another member state by raising exports and production. As a consequence, the European labour markets are hardly interdependent; the labour market in one member state has structurally only a marginal effect on production and relative prices in other member states.

3.3 The functions and flaws of OMC

The cross-border externalities of more jobs and higher growth differ markedly. More employment has virtually no international spillovers, whereas faster productivity growth may lead to significant gains elsewhere. Based on the first observation, one could argue that the European Union has too many competences: the main argument for European involvement with national employment policies is not very strong. At the same time, one could argue that the European Union has too few competences: the community of member states has little influence on national policies to stimulate investments in technologies and know-how, even though these investments have clear international spillovers. Indeed, the member states have promised to stimulate this type of investment but without clear results thus far. For example, in the last five years R&D has been a rather stable percentage of production, even though the member states have endorsed the aim to raise it from less than 2% now to 3% of GDP in 2010. This is probably one of the examples Barroso had in mind, when he concluded that the member states have not delivered. After reviewing the first half of the Lisbon strategy, Barroso has put forward several proposals that should increase ownership of the Lisbon strategy among the member states. National governments should adopt and discuss with their parliaments a National Action Programme, in which targets and actions to reach these target are explicated. Also, the member states should choose a Mr or Ms Lisbon, who is responsible for the progress towards the targets.

European involvement with national employment polices may not only arise from cross-border spillovers. The OMC provides countries perhaps a better opportunity to learn from each others' experiences. Also, the European involvement may help politicians to pursue difficult domestic reforms.

In its ideal-typical form the OMC could serve at least three different functions: it could help to internalise international spillovers, it could help politicians to pursue domestic reforms and it

could allow countries to learn from each other. How well has it served each of these functions? And will the new proposals improve any of these functions? Five years of experience with the Lisbon strategy should help us to answer these questions.

International spillovers

Coordination is a necessary condition for internalising international spillovers. Indeed, the idea behind the OMC is that economic performance of one country has a positive effect on performance of the other countries. As such, the OMC is potentially useful for policies to stimulate knowledge investments or to boost innovation but also for other areas like the environment. The process has similarities with the one that is laid down in the Kyoto Protocol. In the latter process, national targets for reduction in greenhouse gas emissions add up to a common target for reduction. They are different for different countries, and follow from lengthy multilateral negotiations in which a country's circumstances will play a role. The decentralisation of targets does not restrict countries in the way they want to achieve a reduction in greenhouse gas emissions. In principle, the OMC can work in a similar fashion. In practice, the European goals have not been translated into different national targets. The introduction of National Action Programmes may change this practice, though.

A weak point of the Kyoto Protocol is the commitment to the national targets. When a country does not fulfil its target, is there a sanction that will credibly force a country to comply with its obligation? This same point applies even stronger to the OMC. First, in the OMC formal sanctions do not exist. The main sanction mechanism is informal and relies on peer pressure and public opinion. Second, the Lisbon targets are or may prove to be much more ambitious than the Kyoto ones. The targets are set before the costs of reaching these targets are known. What are the costs of increasing R&D expenditure with roughly 1% of GDP? When the costs of reaching a target are high, the target is not credible, whether the sanction mechanism is formal or informal.

Since the sanctions are not strong and the targets not credible, the OMC does not seem to solve the problem of free-riders. Countries then fail to take into account that the benefits of productivity growth spill over to other European countries.

Domestic reforms

The sanction mechanism is central to the organisation of collective, in this case European action. It may also be useful for political action at the national level. Politicians may find it difficult to pursue painful reforms. One reason is that the benefits and costs of such reforms are unevenly distributed. Many may gain, but a few will lose. The losers are relatively well positioned to organise action groups and lobby against plans for reform. This may lead to a 'status quo bias'. Another reason is that re-election is helped with immediate results and not with future benefits. The IMF (2004) estimates that it takes more than 6 years before labour

market reforms have a positive effect on production. With such a time lag the pressure to postpone reforms is large.

The OMC may serve the function of helping politicians to commit themselves to (plans for) reforms. For example, it may be useful in deflecting criticism of unpopular but necessary policy actions at the national level (WRR, 2003; Collignon, 2004). Also peer pressure may contribute to the political determination to carry reforms through. Of course, to serve the function of bringing commitment, targets are appropriate but a European-wide target is not really necessary.

But the OMC does not seem to have worked as a commitment device. After the first half of the Lisbon strategy Barroso has come to the conclusion that 'the single biggest challenge we are facing midway towards 2010 is to fix the implementation deficit'. Apparently, OMC has failed as a commitment device in recent years.

Learning

An important argument for a soft coordination method as the OMC is the potential for policy learning, both bottom-up and cross-national. The idea is that through the process of participation, exchanging information and peer reviews policy learning is stimulated. A problem in obtaining the optimal results for learning is that there is a tension between diversity and learning on the one hand and targeting for convergence and EU wide results on the other hand. Whereas policy learning is a unpredictable, cooperative process, progress on the Lisbon strategy is measured with targets and timetables and is forced by peer pressure.

Although the OMC academic literature has now become a thriving industry, our empirical knowledge of the OMC at work in specific policy processes remains limited. Still, from the preliminary evidence we can draw some lessons regarding its potential for learning. The overall impression emerges that the results have been very limited till now. According to De la Porte and Pochet (2004), the European Employment Strategy has at best sparked national-level discussions. Also cross-national and bottom-up policy learning has been limited.

One seemingly successful result is convergence at the level of ideas in some policy areas (ideational convergence; Radaelli, 2003). This may be an important development, as the convergence at the level of ideas may point the way towards a European model. Radaelli (2003) for instance describes the emergence of an 'EU desirable model' in employment policy, which is a hybrid of Anglo-Saxon and Scandinavian instruments. However, these elements of ideational convergence are still embryonic; furthermore, convergence in 'talk' may not produce convergence in decisions.

Will the new proposals improve the functioning of the OMC?

The adoption of a National Action Programme and the appointment of Mr or Ms Lisbon should improve the informal sanctions when a member states' contribution to growth and jobs is below par. These proposals should '(...) help to get ownership and legitimacy at the national level

would be strengthened through the involvement of social partners and civil society in the preparation of a national Lisbon programme' (Barroso, 2005). By committing national politicians to reforms, they should better than before let countries internalise the international spillovers of their policies.

Clearly, these proposals are not aimed at fostering mutual learning. In areas where spillovers are virtually absent, such that the desired degree of coordination is weak, cross-national learning is the main value added of the OMC. Policy learning should be organised as a voluntary process (see e.g. Groenendijk, 2004). The shift towards national action programmes seeks to reinforce commitment and therefore reduces the potential of learning. This is particularly relevant for employment, where international spillovers are weak, but where the common threat of ageing warrants mutual learning.

In the previous section we have argued that international spillovers of productivity growth are positive and this provides a good reason to put pressure on member states to implement policies that raise productivity growth. Unfortunately, the proposals to renew the Lisbon strategy will not effectively strengthen the functioning of the OMC. There are at least two reasons to think this. The first reason is that politicians will refuse to commit themselves to targets (or deadlines) that are hard to reach. If they will be held personally responsible for reaching targets, then it is to be expected that national targets will not be very ambitious. A second reason why the changes in the governance method might be ineffective is that national voters may still perceive the targets as 'something of Brussels' and that the political consequences for the government and for Mr or Ms Lisbon will therefore small. Especially large countries will not listen to Brussels, as evidence on peer pressure suggests (IMF, 2004). Even when hard sanctions are available, as in the Stability and Growth Pact, large countries may manage to outlaw themselves. For all these reasons, it is questionable whether the new proposals helps the OMC to act as a commitment device or let countries internalise the spillovers of their policies.

Which directions should reforms take?

The Open Method of Coordination potentially serves three tasks: it facilitates learning, it supports national reforms and it internalises cross-border spillovers. The method is applied to a range of policy areas, including jobs and growth, and comprising pensions and the broad economic policy guidelines.

In some policy areas, like innovation policy, international spillovers warrant coordinated action. Member states should raise investment in R&D beyond their national ambition, to let other countries benefit from their inventions, and vice versa. The experience of the past five years has, however, shown that the OMC is not capable of generating the necessary commitment. Although a greater involvement of national governments is a step forward towards more commitment of national governments, we still should not expect too much in this direction. Without formal sanctions there is no way to enforce that the member states improve

productivity growth by raising their investments in R&D. Ideally, the decision-making power in innovation policy should be delegated to the European Union in order to optimally benefit from its potential.

In other policy areas where international spillovers are weak, like in 'jobs', the OMC may already contribute by fostering mutual learning. This learning might be pursued further, in particular in policy areas where member states are faced with similar challenges. Neither the emphasis on national action plans, nor the use of quantitative targets will be very helpful in this respect. Maybe, OMC in its current weak form is most appropriate to serve the task of learning, although the huge diversity within the EU reduces the potential to imitate policies. It may still be too early to judge, but the only result so far seems to lie in the convergence of ideas.

Overall, it seems impossible to serve both jobs and growth with one single governance method. Especially when applied to policy areas with strong international spillovers, like growth, the OMC does not seem the most appropriate method. Or, as Hodson puts it: 'The open method, it is argued, provides a means to minimise the costs of co-ordination, but it is doubtful whether it can deliver the benefits' (Hodson, 2004, p.233).

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