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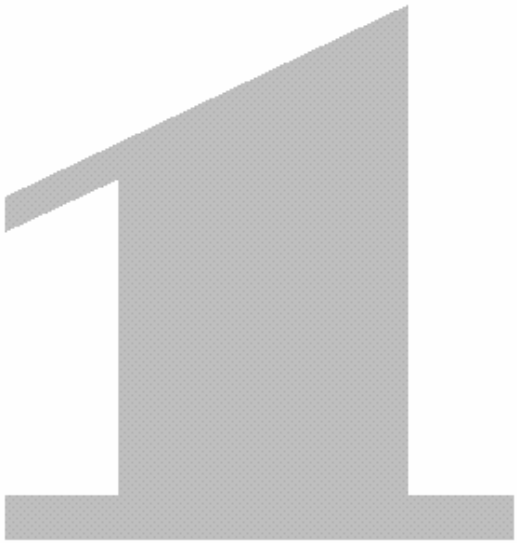

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EXECUTIVE SUMMARY

1 Nearly ten years after the launch of European monetary union and nine years after proclaiming the Lisbon strategy, the European economy is in better shape, but far from becoming «the most competitive economy in the world».

2

Progress has been achieved with respect to employment. Europe is now creating more jobs per year than the USA. But productivity has slowed down. Raising simultaneously the growth of productivity and employment is Europe's task for the next decade.

3

The reasons for Europe's productivity slowdown are partly insufficient implementation of reforms, partly insufficient capital accumulation. Structural reforms were aiming at creating the knowledge society based on highly skilled labour and technological innovation. The results are disappointing. We find in particular, that in many member states the low level of foreign language skills (notably English) is a major obstacle to achieving higher productivity and social equality.

4

But an even more serious shortcoming is the insufficient capital accumulation per worker employed. Europe invests less than the US-economy and it does not sufficiently incorporate the ITC revolution in its capital stock. Europe has to augment the overall growth rate of capital and of investment per worker employed, if it wants to create more well-paid jobs. In order to accelerate capital accumulation, Europe needs to continue structural reforms for the knowledge society. But higher investment will only come forward if macroeconomic policy stimulates the demand for firms to enlarge their capacities. This requires a growth-oriented policy mix of monetary, fiscal and income policies, without threatening price stability.

5

European monetary policy was greatly improved since monetary union began in 1999. Inflation has been kept close to the 2 percent objective of the ECB. It has been lower and less volatile than in the USA. The appreciation of the euro in recent years has not significantly affected European aggregate demand.

6

European fiscal policy remains handicapped by the insistence on national autonomy. The present framework creates incentives for national governments free-riding at the expense of all European citizens. An optimal policy mix requires defining the desirable fiscal stance at the aggregate European level as the counterpart of the unified monetary policy.

7

We recommend that this is done by a new «European DPEF», which needs to have legally binding force. Once the aggregate fiscal stance is defined at the European level, individual member states will receive national net borrowing quota, which are transferable between governments and other public authorities (provinces, municipalities). These borrowing rights could also be traded at market conditions (similar to pollution permits).

8

However, such European-wide fiscal policy needs to obtain the legitimacy of European citizens. In the longer term, it should be defined by a European government that represents all European citizens, based on the political representation in the European Parliament.

9

European income policy needs to take into account the aggregate impact of wages on inflation in the Euro area and be aware of national divergences. From the point of view of price stability, unit labour costs must be kept stable at the inflation target of the ECB (2%). This means that nominal wage costs must not increase more than the sum of average productivity plus 2 percent inflation target.

10

In recent years, wages have grown less and this has contributed to the relative stagnation of the Euro economy. However, wage bargaining in a national setting has created significant distortions. In Spain and Portugal, unit labour costs are now 15 percent above the average European level, in Germany they are 10 percent below. In Italy unit labour costs have steadily increased by more than the Euroland average. These developments create economic and social tensions, which are ultimately unsustainable.

11

The Macroeconomic Policy Dialogue (MED) was intended to make policy makers and social partners aware of the requirements of a stability oriented policy mix. It has failed, largely because it is not transparent and a public debate about policy orientations cannot develop. We suggest that the MED is moved from the Council of ministers to the European Parliament. It should be integrated into the policy deliberations by the Parliament's Economic and Financial Committee, which auditions the ECB president regularly.

12

Europe has enormous potential to increase its citizens' welfare, but the incomplete construction of Europe’s political house prevents better policy making. The new Lisbon Treaty is a necessary (but not sufficient) condition for improved economic governance. To mobilize European citizens for better policies, Europe needs to dare more democracy and debate different policy options across the borders of member states. This Report is CER's contribution.

INTRODUCTION

1 Europe is coming together. Over the last two decades, important milestones have been reached: the completion of the single market, the introduction of the euro, enlargement of the European Union to 27 members States and nearly 500 million citizens.

2

Yet, the construction of the European house remains incomplete. The economy seems to have slowed into semi-permanent stagnation: new policy issues like domestic security and foreign policy emerge. The important advances in integration require new forms of governance. There is a prevailing sense that the old Europe is dead, but the new, not yet born. Not surprisingly, many citizens are having second thoughts. The European Constitutional Treaty was rejected by a majority of voters in France and the Netherlands, and populists and euro-skeptics in many countries seem to gain influence. Europe is coming together, but its governance is in crisis. More and more European citizens share common public goods, but no European Authority is charged with their efficient administration.

3

Europe's policy-making must become more efficient. Citizens expect better results from European integration, more prosperity and security. They recognize that the world is changing, but they want Europe to be the instrument by which globalization keeps a human face. They want a bigger say in the decisions taken by policy-makers, so that their preferences for the common goods are taken into account, but democracy remains rudimentary at the EU-level.

4

The Reform Treaty of Lisbon is going to remedy some of the most obvious short-comings in Europe's present institutional arrangements. This is a necessary step to overcome the present crisis of confidence. But it is not sufficient. European institutions and policy makers need clear ideas, where they want to go. These ideas must emerge from a European-wide debate about the future orientations of European policies. At the core stands the debate about economic policies.

The Lisbon Strategy

5

In the year 2000, the European Council set up a policy action program that came to be known as the Lisbon Strategy. It was a response to the economic stagnation, which had gripped Europe in the 1990s and caused unemployment to reach intolerable levels. The heads of states and governments set themselves the objective to make Europe «the most dynamic and competitive economy by 2010» and they designed a strategy for achieving this aim. It was based on two ideas: *(1)* structural reforms must increase Europe's productive potential by creating the «knowledge society»; *(2)* macroeconomic management must achieve a policy mix, whereby aggregate demand in the European economy is absorbing the higher growth potential without creating inflationary pressures. In order to implement this strategy, the Open Method of Coordination was set up, whereby governments committed

themselves to reach specific objectives measured by structural indicators. Deviating behaviours was to be monitored by intergovernmental forms of cooperation, peer pressure by government bureaucracies, and naming and shaming. Contrary to the single European market program or monetary policy, the European Commission was not the centralized agent who was driving the process; it had only a supporting role.

6

Has it worked? The question is pertinent as we enter the 9th year of the strategy. In 2005, the Barroso Commission undertook a mid-term review. It found the achievements lacking and refocused the strategy on growth and investment. However, in practice, it cut out the macroeconomic part of the strategy; instead it put the emphasis on «structural reforms» and rendering the labour market «more flexible».

7

In this report, we analyse the performance over the last eight years in comparison to the previous decade. We find that the labour market has become more «flexible» at the low-wage and this has increased employment but at the expense of productivity. This is a serious problem, for labour productivity is the key to prosperity, competitiveness in the global economy and social justice. Italy is the worst performer in this respect. We find evidence that the shortcomings of the Lisbon Strategy were reinforced by inadequate macroeconomic management, which prevented the more accelerated accumulation of capital. These observations could become highly relevant if the European Union is to consider a follow up Lisbon II Strategy. We will first analyse Europe's economic performance, then look at macroeconomic management and finally make some policy recommendations.

EUROPE'S DISAPPOINTING ECONOMIC PERFORMANCE

8 In the long run, economic growth depends on three factors: the growth of the labour force, of capital and the total productivity of both factors.
Figure 1 shows the long term evolution of these variables for Europe. We notice the closely matched pattern of capital and Total Factor Productivity (TFP), and the long and lasting reduction in capital accumulation.

9
To measure the growth dynamics of the European Union before and after Lisbon, the most appropriate indicator is the growth of GDP per capita. In the eight years following the Lisbon Council, the average growth rate of the EU 25 has been 1,8%, slightly higher than in the USA (1,65%). However it is lower in the former EU 15 (1,6%) and even less in the Euro area (1,4%). Figure 2 shows the long term trend of per capita GDP growth. In the Euro area it has been lagging behind the US since the early 1990's, essentially because in the US, booms (actual growth exceeding the trend) have been more frequent and lasting longer.

10
Compared to the previous decade, trend growth has decelerated on both sides of the Atlantic, but in Euroland nearly 50% more than in the US, given the initial growth rate. We do not have data for the new member states, but of the former EU15 countries only 6 have improved per capita growth from one decade to the next, most spectacularly in Greece, Finland and Sweden (table 1). Yet, equally spectacular was the growth reduction in Portugal, the Netherlands and Austria; in the two bigger countries (Italy and Germany) per capita income has also decelerated significantly. These data do not point to a success of the Lisbon Strategy. Europe has not become the «most dynamic economy in the world». We must explain why European growth is so slow.

Employment growth

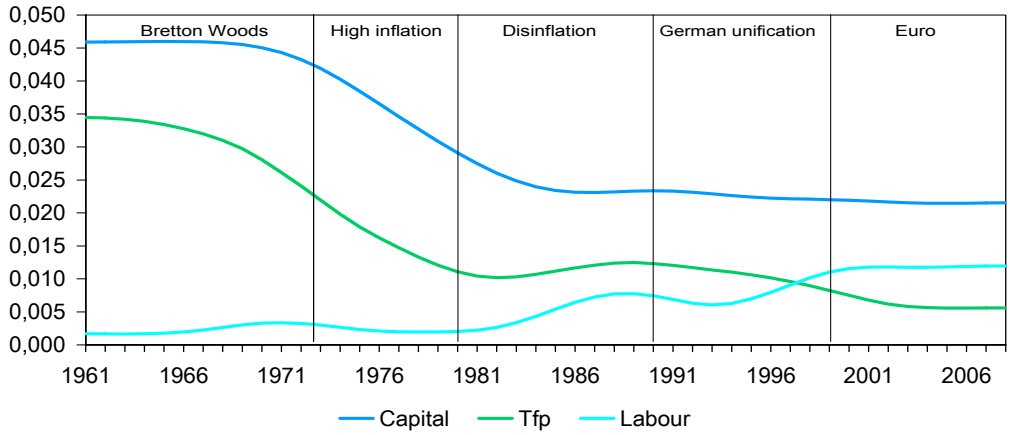
11
Per capita income can be explained by the contribution made by the size of the employed labour force and the productivity of those who work (1). Let us first look at employment, which used to be Europe's most urgent problem. For years, unemployment revealed a «ratcheting effect». Most economists nowadays agree that European unemployment must be explained by the interaction of institutional features and macroeconomic shocks (Blanchard, 2005). Shocks push unemployment up, institutions make it persistent. Hence structural reforms of the labour market are required to make unemployment short-lined and macroeconomic management should minimize the impact of economic shocks. What are the facts?

12
Unemployment has come down considerably since European monetary union started (in fact since 1995, when economic convergence to the Maastricht criteria became credible),

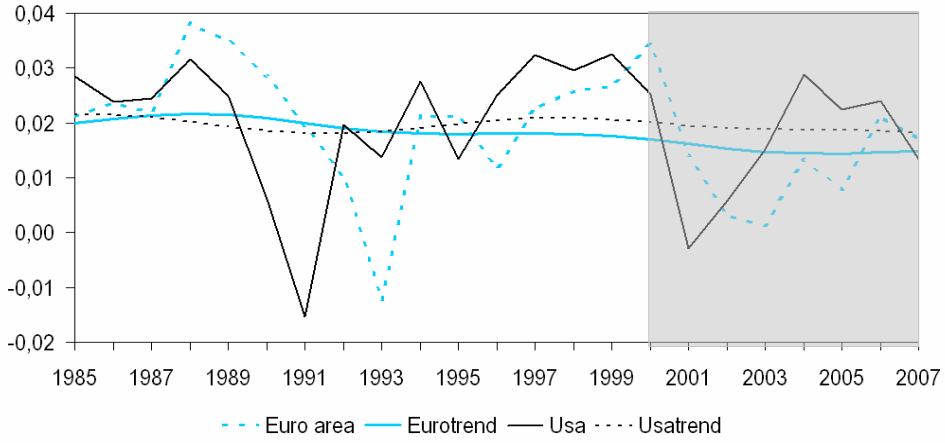
(1) The relation can be described by the equation: Y/N = Y/L × L/N, where Y stands for output, N for population and L for persons employed. Y/L is labour productivity.

FACTOR OF PRODUCTION IN THE EURO AREA **Figure 1**

(long term growth)



GROWTH RATES OF PER CAPITA INCOME: ACTUAL AND TREND **Figure 2**



but the Lisbon Agenda in 2000 does not seem to have made much difference: the peak in trend unemployment was in 1996; after 2000 there is no visible break in unemployment trends for the Euro area. However, one may argue that structural reforms in the 1990s have contributed to reversing the «ratcheting effect», whereby economic shocks have pushed structural unemployment up, while subsequent recoveries did not bring it back to the original level.

13

Furthermore, the macroeconomic environment has been remarkably favorable over the last decade; shocks have become less important since European monetary union started and this has supported economic growth and job creation (for evidence see Collignon, 2008). However, the fact that unemployment has fallen more rapidly during booms in the Euro area compared to the EU15, but also risen faster during growth slowdowns (figure 3), may indicate

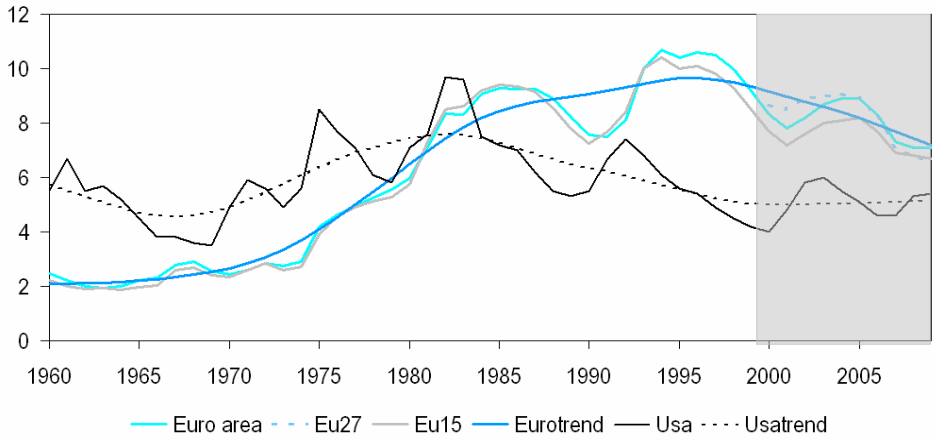
PER CAPITA INCOME DIFFERENCE **Table 1**

		Annual growth		Difference	
		1990-99	2000-07	Absolute	%
	Euro area	1,75%	1,40%	-0,35%	-20,1%
	Former EU-15	1,74%	1,57%	-0,17%	-10,0%
	EU-25		1,78%		
	USA	1,85%	1,65%	-0,20%	-10,7%
1	Latvia		8,69%		
2	Estonia		8,68%		
3	Lithuania		7,43%		
4	Bulgaria		5,93%		
5	Romania		5,83%		
6	Slovakia		4,52%		
7	Hungary		4,31%		
8	Czech Republic		4,07%		
9	Greece	1,12%	3,84%	2,72%	243,0%
10	Ireland	6,31%	3,83%	-2,48%	-39,3%
11	Poland		3,73%		
12	Slovenia		3,57%		
13	Luxembourg	3,26%	3,27%	0,01%	0,2%
14	Finland	1,07%	2,88%	1,81%	169,0%
15	Sweden	1,18%	2,47%	1,29%	108,8%
16	Spain	2,39%	2,19%	-0,20%	-8,5%
17	UK	1,82%	2,18%	0,36%	19,9%
18	Cyprus		1,77%		
19	Denmark	2,00%	1,67%	-0,33%	-16,5%
20	Belgium	1,78%	1,63%	-0,16%	-8,8%
21	Netherlands	2,40%	1,53%	-0,87%	-36,1%
22	Austria	2,16%	1,53%	-0,63%	-29,3%
23	France	1,44%	1,35%	-0,09%	-6,2%
24	Germany	1,74%	1,17%	-0,57%	-32,8%
25	Italy	1,38%	0,79%	-0,59%	-42,8%
26	Malta		0,75%	0,75%	
27	Portugal	2,69%	0,58%	-2,11%	-78,4%

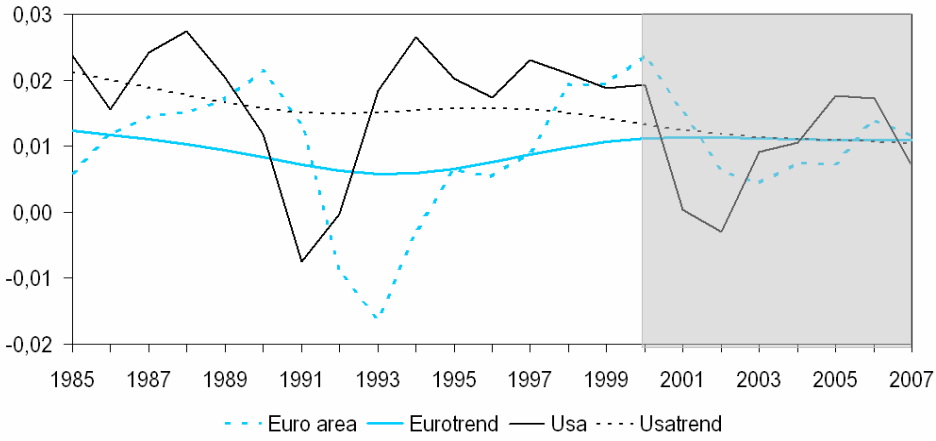
Source: European Commission, AMECO 2006

that macroeconomic management in the Euro area is less responsive to negative shocks than it is in the out-countries. This raises questions about the institutions of macroeconomic governance in the Euro zone rather than the labour market.

UNEMPLOYMENT RATES: EUROPE AND USA **Figure 3**



EMPLOYMENT GROWTH: USA AND EUROLAND **Figure 4**



14

Another interesting feature is the comparison with the USA. While unemployment rates are still higher in Europe, the recent decade shows a rising trend for the US and a fall for Europe. These observations are also born out by looking at employment. Figure 4 shows that employment growth in Euroland has come up since the mid 1990s and has stabilized at a 1% trend rate. This trend is now slightly higher than in the USA.

15

Employment has made a positive contribution to per capita growth dynamics since the euro was introduced in 1999 and the Lisbon Strategy adopted in 2000. It has improved in all member states except in Ireland, Denmark, the Netherlands and France. In Ireland employment is still growing at a high level, even if the growth rate was slashed by half (table 2). Whether these developments were due to the euro or Lisbon is hard to say. No doubt

EMPLOYMENT GROWTH DIFFERENCE **Table 2**

		Annual growth		Difference	
		2000-07	1990-2000	Absolute	%
	Euro area	0,4%	0,0%	0,3%	1909,5%
	Former EU-15	0,4%	0,0%	0,4%	-996,3%
	EU-25	0,4%			
	USA	-0,3%	0,3%	-0,6%	-197,2%
1	Luxembourg	2,7%	1,9%	0,8%	40,2%
2	Spain	1,7%	1,3%	0,4%	34,2%
3	Bulgaria	1,7%			
4	Latvia	1,7%			
5	Estonia	1,5%			
6	Ireland	1,4%	2,9%	-1,6%	-53,0%
7	Lithuania	0,8%			
8	Finland	0,8%	-1,4%	2,2%	(154.9%)
9	Greece	0,8%	0,0%	0,8%	(2223.6%)
10	Hungary	0,6%			
11	Cyprus	0,5%			
12	Sweden	0,5%	-1,3%	1,8%	(139.4%)
13	Slovakia	0,5%			
14	Romania	0,5%			
15	UK	0,4%	-0,1%	0,6%	(488.5%)
16	Belgium	0,4%	0,3%	0,2%	74,1%
17	Italy	0,4%	-0,2%	0,5%	(342.3%)
18	Slovenia	0,3%			
19	Czech Republic	0,3%			
20	Austria	0,2%	0,0%	0,2%	895,9%
21	Malta	0,2%			
22	Germany	0,1%	-1,1%	1,2%	(114.1%)
23	Poland	0,1%			
24	Netherlands	0,0%	1,1%	-1,1%	-101,8%
25	Portugal	-0,1%	0,5%	-0,6%	-115,2%
26	Denmark	-0,1%	0,0%	-0,1%	572,2%
27	France	-0,1%	0,4%	-0,6%	-134,0%

Source: European Commission, AMECO 2006

monetary stability in Euroland has contributed to higher investment, despite exogenous shocks occurring in the world economy. However, it is also true that structural reforms have made it easier to employ people in long term unemployment, with low skills, and part-time

workers, who were previously outside the labour market. Europe's reform agenda of recent years has made the labour market more «flexible» at the lower end and this seems to have translated into higher levels of employment when effective demand increased (European Commission, 2007a). However, many labour market reforms were decided in the mid-1990s well before the Lisbon Strategy was agreed in 2000. This would indicate that the Lisbon Strategy has not made a significant difference in making Europe more dynamic and competitive.

16

But even if employment has improved, GDP per capita has grown less rapidly than in the previous decade. This fact must be explained by a slowdown in labour productivity, the second factor determining average income levels.

Productivity and structural reforms

17

Accelerating the growth of productivity is the challenge for the next decade. Productivity determines wealth, prosperity and the level of real wages. When labour productivity increases slowly, there is little room for real wages to improve. Faster productivity growth is also necessary to secure the European social model. Especially in a society where people live longer and have fewer children, the shrinking work force has to become more productive in order to guarantee the supply of healthcare and retirement for all. Thus, increasing labour productivity is a necessary condition for improved standards of living, higher wages and fighting poverty in the long run.

The slowdown of labour productivity

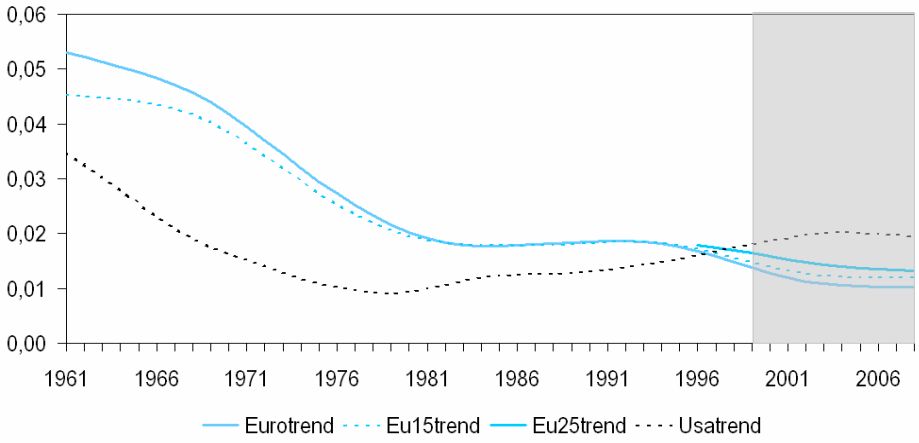
18

The developments of the last decade have been dissatisfactory. Although more people work today than in the year 2000, productivity has slowed down. Firms have hired people, whose marginal productivity was lower than the average. This is in agreement with the hypothesis that the labour market has become more «flexible» at the lower end. Nevertheless, this fact does not justify the conclusion that there is a trade off between employment and labour productivity (see European Commission, 2007). In fact, the 1960's were an example for a period when high productivity growth was compatible with full employment. And standard neoclassic theory has established that in the long term labour productivity and employment growth are unconnected. Thus, we do not have to choose: we can have high productivity and high employment.

19

Productivity is largely determined by the supply side of the economy, while job creation also depends on the growth of aggregate demand and GDP. In fact, employment will only increase if GDP grows at a faster rate than labour productivity. This is a tautology. However, labour productivity also depends on the stock of capital per person employed. An increasing stock of capital per worker will make labour more efficient. But only if the total stock of

LABOUR PRODUCTIVITY TRENDS: EUROPE AND USA **Figure 5**



capital grows faster than the capital-labour ratio, also called capital intensity, will employment increase. Hence, labour productivity and employment growth depend on the conditions of capital accumulation. But the growth of the capital stock is a matter of supply side reforms as well as macroeconomic policies. The interaction between monetary, fiscal and income policies determines whether firms find it advantageous to invest. We will now try to identify the underlying effects.

20

Figure 5 presents the long term productivity trends, calculated by the Hodrick-Prescott filter, which smoothes out cyclical variations. Table 3 shows the average of the actual growth rates in the reference periods. A clear picture emerges: the long term trend in labour productivity has been higher in the United States than in Europe since the mid 1990, regardless if one looks at the euro area, the former EU15 or the EU25. Euroland is the worst performer and this justifies the focus on the Euro area in the following text.

21

In table 3 we find a deterioration of labour productivity growth in most member states of the European Union from one decade to the next, although growth rates are significantly higher in the new member states in Eastern Europe (with the exception of Poland and Slovenia).

22

The good performance by new member states is not surprising, because countries with relatively low productivity levels can achieve rapid catch-up growth to the most developed economies, if they adapt their productive system. And this is precisely why these countries wanted to join the EU. However, labour productivity has *decelerated* in the recent decade in all member states of the former EU 15 - with the exception of Greece. The Lisbon agenda has failed its most important purpose: to make Europe the most dynamic economy in the world.

LABOUR PRODUCTIVITY GROWTH DIFFERENCE

Table 3

		Annual growth		Difference	
		2000-07	1990-1999	Absolute	%
	Euro area	1,0%	1,7%	-0,7%	-40,5%
	Former EU-15	1,2%	1,8%	-0,6%	-33,1%
	EU-25	1,4%			
	USA	1,9%	1,6%	0,4%	22,6%
1	Estonia	7,2%			
2	Latvia	7,0%			
3	Lithuania	6,6%			
4	Romania	5,3%			
5	Bulgaria	4,2%			
6	Slovakia	4,0%			
7	Czech Republic	3,7%			
8	Hungary	3,7%			
9	Poland	3,6%			
10	Slovenia	3,2%			
11	Greece	3,1%	1,2%	1,9%	166,5%
12	Ireland	2,5%	3,4%	-0,9%	-27,4%
13	Finland	2,1%	2,5%	-0,4%	-16,2%
14	Sweden	2,0%	2,4%	-0,5%	-19,4%
15	Denmark	1,8%	2,0%	-0,3%	-12,8%
16	UK	1,7%	1,9%	-0,2%	-10,4%
17	Netherlands	1,6%	1,3%	0,2%	17,6%
18	France	1,5%	1,3%	0,2%	13,3%
19	Austria	1,3%	2,1%	-0,8%	-37,6%
20	Cyprus	1,3%			
21	Belgium	1,2%	1,5%	-0,3%	-22,6%
22	Germany	1,0%	2,5%	-1,5%	-59,2%
23	Portugal	0,7%	2,2%	-1,5%	-70,0%
24	Luxembourg	0,6%	1,4%	-0,8%	-55,3%
25	Malta	0,6%			
26	Spain	0,5%	1,1%	-0,6%	-58,7%
27	Italy	0,4%	1,5%	-1,1%	-72,9%

Source: European Commission, AMECO 2006

Total Factor Productivity and the Lisbon Strategy

23

Theory tells us that labour productivity is determined by Total Factor Productivity (TFP) and capital intensity (CI) (2) In this section we will discuss TFP, in the next capital intensity.

24

Total Factor Productivity is usually interpreted as the structural component of productivity. It increases as a result of the more efficient use of capital and labour in the economy and is, therefore, dependent on industrial policy, structural reforms, social systems, etc. For example, if market deregulation leads to the more efficient allocation of capital into sectors that yield higher output, TFP increases. However, there are also other than purely allocative factors increasing TFP, and they are described by the concept of X-efficiency (Leibenstein, 1966). For example, if active labour market policies improve the skill levels of the labour force, employing better trained workers will allow higher output per worker and per unit of capital. Similarly, if more people spoke English or other foreign languages, they would be able to benefit from the opportunities of a globalised economy (to which they can, for example, connect through the internet) and this would translate into higher value added in the economy. Or if new technology is incorporated into capital equipment, replacing old by new equipment would increase the productivity of the existing labour force.

25

Social regulation is also important. In the public debate the case is sometimes made that raising Europe's potential growth rate in the framework of increasing competitive pressure in the European or global market might be inconsistent with social protection i.e. that the there might be a trade off between growth and social protection (or efficiency and equity) in Europe. However, the impact of Europe's social model on economic efficiency is ambivalent. Removing rigidities that prevent the efficient allocation of labour and capital would lift productivity. But minimum wages, legal limits on work hours, obstacles on hiring and firing, etc., may also incite companies to rationalize work procedures and reduce costs, and this would improve TFP at the firm level. Thus, there is no general rule of what the «best» social model would be. A number of studies have shown (P.C. Padoan, L. Rodano, 2007) that the characteristics of specific social models do not contribute to economic convergence. For example, Greece, Scandinavia and the Anglo-Saxon economies represent very different models of social welfare, taxes, government expenditure etc, although their growth rate in TFP is above the European average. Our regressions reported below also find no significant impact on productivity. Economic growth, convergence to high income levels and higher productivity is compatible with a variety of different social models and there is no need for all member states having to adopt the same model. We must find other explanations for Europe's disappointing productivity record.

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(2) Taking the neoclassical Cobb-Douglas production function: $Y = TFP * L^{\alpha} K^{1-\alpha}$ ***, where*** α ***is the wage share in the contribution to output, dividing by L to get labour productivity Y/L and taking logarithms and first differences yields:*** $\Delta(y-l) = \Delta tpf + (1-\alpha)\Delta(k-l)$ ***, where (y-l) is the logarithmic expression for labour productivity and (k-l) for capital intensity.***

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Nevertheless, microeconomic reforms aiming to increase productivity at the firm level can also create externalities and frictions at the macro level, and lower productivity for the economy as a whole. Thus, X-efficiency plays potentially an important part in increasing Total Factor Productivity, although it is not always clear which reforms improve or damage it. Statistical measurements remain often insignificant (European Commission, 2007a). Nevertheless, European member states have a tendency to grow faster, if they start from low per capita income. This «catch-up» growth reflects the fact that economic late-comers can make investment that incorporates the most advanced state of technology, while the more advanced economies can only grow at the rate of new technological development. As a consequence, accelerating growth requires focusing resources on invention and innovation in the high income member states, and maintaining a high rate of investment in human and physical capital in low-income states.

27

The Lisbon strategy with its focus on creating the knowledge society and reforming the social model clearly aimed at improving TFP. Globalisation and Europeanization are causing the redistribution of employment across sectoral occupational and skill categories. Demand for high-skilled workers increases, for low-skilled labour it declines (ECB, 2008). The purpose of the knowledge society is to improve the general knowledge of all employees and to up-grade the low-skilled work force, so that displaced workers are more easily employable. However the results are disappointing. We do not have estimates for Total Factor Productivity in the new member states, but in most of the former EU15 countries, TFP growth has come down when compared to the previous decade. In Portugal, Spain and Luxembourg TFP growth is even negative (table 4). The only exceptions are Greece and Sweden where Total Factor Productivity has accelerated.

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Given the opposite trends in employment and productivity, a picture emerges whereby reforms of the Lisbon Strategy may have contributed to more flexibility in the labour market at the lower end, thereby increasing overall employment, but at the loss of Total Factor Productivity. In order to assess the possible impact of the Lisbon Strategy on TFP, we have checked econometrically a number of structural indicators for their effects on the growth rate of TFP. Structural indicators are indicators for policies to which national governments have committed themselves in the process of the open method of coordination. Table 5 gives the list of tested variables. Box 1 «TFP and the Lisbon Strategy» explains the econometrics, and table 6 gives the results. We have added indicators for language skills, corporate taxes and social inequality (Gini-coefficient), which are not part of the official Lisbon structural indicators, but reflect the philosophy of the Lisbon Agenda.

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Most of the structural indicators had no statistically significant effect on TFP. The only exceptions were the classical factors known from growth literature, such as R&D

COMPONENTS OF LABOUR PRODUCTIVITY Table 4

		Total factor productivity (growth and difference)				Capital intensity (K/L) (growth and difference)			
		2000-08	1990-1999	%-points	% of 1990-99	2000-08	1990-1999	%-points	% of 1990-99
	Euro area	0,53%	1,00%	-0,47%	-47,3%	1,22%	1,92%	-0,70%	-36,5%
	EU-15	0,69%	1,08%	-0,39%	-36,3%	1,28%	1,87%	-0,58%	-31,5%
	USA	1,12%	1,18%	-0,06%	-4,9%	2,21%	1,09%	1,11%	102,0%
1	Greece	2,20%	0,61%	1,60%	262,5%	2,60%	1,62%	0,98%	60,4%
2	Finland	1,81%	1,90%	-0,09%	-4,6%	2,29%	-0,08%	2,37%	-3020,3%
3	Sweden	1,69%	1,53%	0,16%	10,5%	2,04%	0,85%	1,19%	141,0%
4	Ireland	1,56%	3,40%	-1,84%	-54,1%	2,00%	3,17%	-1,17%	-36,9%
5	Uk	1,16%	1,39%	-0,23%	-16,3%	1,65%	1,56%	0,09%	5,5%
6	Netherlands	1,03%	1,17%	-0,14%	-11,9%	1,60%	2,37%	-0,77%	-32,4%
7	Germany	0,96%	1,54%	-0,57%	-37,3%	1,55%	0,90%	0,65%	72,9%
8	Denmark	0,93%	1,67%	-0,74%	-44,4%	1,44%	2,00%	-0,56%	-27,9%
9	Belgium	0,80%	0,81%	-0,02%	-2,4%	1,36%	0,38%	0,98%	256,5%
10	Austria	0,73%	1,26%	-0,53%	-42,2%	1,34%	1,64%	-0,30%	-18,6%
11	France	0,52%	0,69%	-0,18%	-25,3%	1,31%	2,38%	-1,07%	-44,9%
12	Italy	0,01%	0,77%	-0,76%	-98,5%	1,15%	2,18%	-1,03%	-47,2%
13	Portugal	-0,06%	1,05%	-1,11%	-105,3%	1,01%	1,82%	-0,81%	-44,5%
14	Spain	-0,09%	0,34%	-0,43%	-126,6%	0,76%	1,60%	-0,84%	-52,4%
15	Luxembourg	-0,13%	0,94%	-1,07%	-113,5%	0,75%	2,41%	-1,65%	-68,7%

Source: European Commission, AMECO 2006

expenditure, education, etc. However, we included one additional variable, namely command of foreign languages, and in particular English. It turns out that this is a highly significant driver of TFP, which often changes the significance and the sign of other variables in the regressions.

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Regression 1 in table 6 shows that there is only weak evidence for automatic catch-up growth in TFP. However, the catch-up effect increases, once we specify policy variables. We find that either spending on R&D as a percentage of GDP or patent applications are a good indicator for factors that increase TFP. This is also confirmed by the number of science and technology graduates. These variables indicate Europe's capacity to push the technological frontier. The general up-grading of skill-levels is measured by the youth education attainment level (EDU), which also contributes positively to TFP. As discussed above, indicators of the social model are less convincing. Corporate tax rates seem to be positively correlated with TFP, but labor taxes are not significant. This surprising result seems to indicate that firms seek to improve the productivity of all their factors of production, if they have to pay higher taxes on profit. But taxes and social contributions on labor only affect the cost of one factor and this induces substitution effects (see below). Few other social indicators remained significant. Only the Gini-coefficient indicates a positive correlation between the growth of TFP and the level of income inequality, but the causality of this link is questionable.

TESTED VARIABLES

Table 5

Variable	*Description*	*Source*	*year*
R&D, Innovation, diffusion of technology			
Gross domestic expenditure on R&D (SRD)	Percentage of GDP	Eu Commission	1996;2000;2004
Patent applications to the European Patent Office (EPO)	Number of applications per million inhabitants	Eu Commission	1996;2000;2004
Level of Internet access - households (INTAC)	Percentage of households who have Internet access at home	Eu Commission	2002;2004
Broadband penetration rate	Number of broadband lines subscribed in percentage of the population	Eu Commission	2002;2004
E-government on-line availability	Online availability of 20 basic public services	Eu Commission	2002;2004
EDUCATION			
Youth education attainment level - total (EDU)	Percentage of the population aged 20 to 24 having completed at least upper secondary education	Eu Commission	1996;2000;2004
Science and technology graduates- total (ITGRA)	Tertiary graduates in science and technology per 1 000 of population aged 20-29 years	Eu Commission	1998;2000;2005
Spending on Human Resources	Total public expenditure on education as a percentage of GDP	Eu Commission	1996;2000;2004
Life-long learning (adult participation in education and training) - total (LEA)	Percentage of the adult population aged 25 to 64 participating in education and training	Eu Commission	1996;2000;2004
English speaking population (ENG)	Percentage of population	Eurobarometer	2006
SOCIAL AND FISCAL			
Corporate tax rate (CTAX)	Percentage on income earned by corporate	KPMG	1996;2000;2004
Implicit tax rate on labour (TAX)	Ratio of taxes and social security contributions on employed labour income to total compensation of employees	Eu Commission	1996;2000;2004
Total expenditure- General Government	Percentage of GDP (average yearly level)	Eurostat	1996-1999; 2001-2003; 2004-2006
Total expenditure (net interest)- General Government	Percentage of GDP (average yearly level)	Eurostat	1996-1999; 2001-2003; 2004-2006
Public Investment	Percentage of GDP (average yearly level)	Eurostat	1996-1999; 2001-2003; 2004-2006
Gender pay gap in unadjusted form	Difference between men's and women's average gross hourly earnings as a percentage of men's average gross hourly earnings	Eu Commission	1996;2000;2004
Inequality of income distribution (INE)	Ratio of total income received by the 20% of the population with the highest income to that received by the 20% of the population with the lowest income	Eu Commission	1996;2000;2004
Gini Index (GINI)	Measure of inequality income distribution; the range is from 0 (perfect equality) to 1 (perfect inequality)	Eurostat	1996;2000;2004
At-risk-of-poverty rate after social transfers - total (POV)	Share of persons with an equivalised disposable income, after social transfers, below the risk-of-poverty threshold	Eu Commission	1996;2000;2004
MARKET INTEGRATION			
Trade integration of goods	Average value of imports and exports of goods divided by GDP, multiplied by 100	Eu Commission	1996;2000;2004
Trade integration of services	Average value of imports and exports of services divided by GDP, multiplied by 100	Eu Commission	1996;2000;2004
Public procurement	Value of public procurement which is openly advertised - Percentage of GDP	Eu Commission	1996;2000;2004

REGRESSION RESULTS

Table 6

Dependent variable: TFP growth 1996-2007

Independent variables	Regression 1	Regression 2	Regression 3	Regression 4	Regression 5
Constant	0.0292**	0.0589***	0.0577***	0.0507***	0.0455***
TFP	-0,0076	-0.0202***	-0.0197***	-0.017***	-0.0152***
SRD	-	0.0043**	0,3%	-	-
EPO	-	-	-	0.0026**	0.0043***
EDU	-	0.0024*	0,1%	0.0035***	0.0048***
ITGRA	-	0.0025**	0.0028**	0.0023**	0.0015*
CTAX	-	0.0024**	0.0024**	0.0017*	-
TAX	-	-	0,2%	-	-
GINI	-	-	-	-	0.0027*
ENG	-	0.0036**	0.0046**	0.0034***	0.0024***
DUP1°	-	0.0042***	0.0043***	0.0045***	0.006***
DUP2°°	-	-0.0027*	-0.0027*	-0.0026*	-
Random Effects (for countries)	yes	yes	yes	yes	yes
R2	0,52	0,80	0,81	0,76	0,69
DW	2,33	2,60	2,64	2,41	2,27

Note: ***,**,* denote respectively significance at 1,5,10% level

° Dummy for the period 1996-2000

°°Dummy for the period 2000-2004

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The overall message of our estimates is clear: creating the knowledge society and improving skill-levels is the best strategy to improve Total Factor Productivity in Europe. In this context, language skills are of crucial importance. One of the strongest variables for rising TFP is the capacity of speaking English. It remains statistically significant in all our regressions and has high coefficients relative to other variables. Table 7 shows the correlations between the ability to speak English and other variables. The number of patents (EPO), educational attainment (EDU), life-long learning (LEA) and access to internet (INTAC) are all positively correlated with English language skills. Inequality (INE) and poverty (POV) decrease when more people speak English.

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This is not surprising. Being able to communicate is a key variable for opening up to the world. Yet 44% of Europeans do not speak any foreign language. Furthermore, command of

TFP AND THE LISBON STRATEGY

To qualify productivity dynamics in Europe, we have analysed the relationship between Total Factor Productivity (TFP) growth and the Lisbon Strategy (LS). The aim of the panel regression analysis is to find if, and eventually how, the Strategy seems to «help» productivity, accelerating growth and promoting convergence within Europe.
In this perspective TFP growth rates for 15 EU countries (1) over 1996-2007 period, are regressed on the starting level of TFP (to get the «catching-up» mechanism) and the level of a set of indicators representatives of the LS Agenda. Thus, our reference estimation framework is:

$$DTFP(07\text{-}96) = \alpha 1*C+\alpha 2*TFP+ \alpha 3*LS1+ \alpha 4*LS2+ \alpha 5*LS3\ldots..$$

Working on the regression we had three issues to solve:
i) getting a satisfactory number of observations;
ii) finding homogeneous levels of TFP for countries included;
iii) selecting an appropriate group of variables to reflect the LS commitment to support European productivity.

We did the following:
i) To increase the number of observations, we have separated the decade analysed in three sub-periods, thus shifting from a «cross-section» to a «panel» analysis (1996-2000; 2000-2004; 2004-2007). We decided not to use annual data to better catch the eventual convergence process.

ii) To calculate the TFP level for each country, we used the EU KLEMS dataset, following:

$$TFP=\log(VA)-QL*\log(HL)-(1-QL)*\log(CAP)$$

Where: VA is the gross real value added; QL is the quota of labour compensation in gross value added; HL are the total hours worked; CAP is the volume of capital services in one year (2).

iii) To select the other explanatory variables we referred mainly to the Structural Indicators (SI) database from EU Commission. Table 5 in the text reports the definition, sources and years of each variable included in the regression. We grouped the 22 indicators considered the data in four broad categories: R&D, innovation, diffusion of technology; Education; Social and fiscal; Market integration (3).

Finally, to control for «countries specificity» we estimated our regression including random effects (in fact, to include fixed effects there are not enough observations). Not all the variables tested were found statistically significant.

_____

(1) Belgium, Denmark, Germany, Ireland, Greece, Spain, Italy, Netherlands, Austria, Portugal, Finland, Sweden, United Kingdom, Norway (a member of the European Economic Union); we added also euro area aggregate data. When Eu12 is not available we use Eu15.
(2) More precisely, we have estimated the levels in 1970 and then «updated» them applying the TFP growth index available in the EU Commission on line database (AMECO).
(3) Before estimation, data sets of each variable have been standardised.

ENGLISH LANGUAGE SPEAKING: SOME CORRELATIONS **Table 7**

	ENG	EPO	EDU	LEA	INTAC	INE	POV
ENG	1,00	0,34	0,51	0,72	0,71	-0,47	-0,39
EPO	0,34	1,00	0,38	0,56	0,72	-0,78	-0,82
EDU	0,51	0,38	1,00	0,36	0,44	-0,69	-0,55
LEA	0,72	0,56	0,36	1,00	0,80	-0,60	-0,64
INTAC	0,71	0,72	0,44	0,80	1,00	-0,75	-0,76
INE	-0,47	-0,78	-0,69	-0,60	-0,75	1,00	0,92
POV	-0,39	-0,82	-0,55	-0,64	-0,76	0,92	1,00

(*) See table 5 for acronym

English is the only valid vehicle for global communication, especially in research (3) but it is underdeveloped in most member states (table 8), despite the fact that 68 percent of all Europeans (other than English mother tongue speakers) consider it by far the most useful language to know and 70 percent believe that everyone in the European Union should be able to speak a common language.

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Europe relishes in the self-image of cultural diversity, but it is incapable of communicating and sharing this wealth. Furthermore, speaking foreign languages is also important to improve the mobility of labour across the European Union: language barriers have often been cited as the biggest obstacle for job mobility (Amber and Graham, 2002). Not surprisingly, 67% of European citizens agree that teaching languages should be a political priority. The European Council in Barcelona in 2002 set the long term objective for all EU citizens to speak two languages in addition to their mother tongue (4), but little progress has been made. Our regressions indicate that reforming the European school system by teaching English to all children before the age of 6 (and another language in the UK and Ireland) would have the single most important impact on improving TFP in Europe.

Capital intensity

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However, although TFP is largely dependent on technology and organisational rationality in the economic system, labour productivity also depends on capital intensity, i.e. the amount

(3) Speaking English is also an indicator for other ways of opening minds and cultures. The correlation coefficient between speaking «one other language» and having internet connection in the household is 0,33, and the correlation between speaking English and having access to internet is 0,71. The correlation between not speaking any foreign language and having internet at home is -0,3303. (Data from Special Eurobarometer 249 / Wave 64.4 – TNS Opinion & Social, July 2006 and Eurobarometer, 246, February 2006, own calculations).

(4) Conclusions of the Barcelona European Council in March 2002:
http://ue.eu.int/ueDocs/cms_Data/docs/pressData/en/ec/71025.pdf

FOREIGN LANGUAGE SKILLS IN EUROPE

Table 8

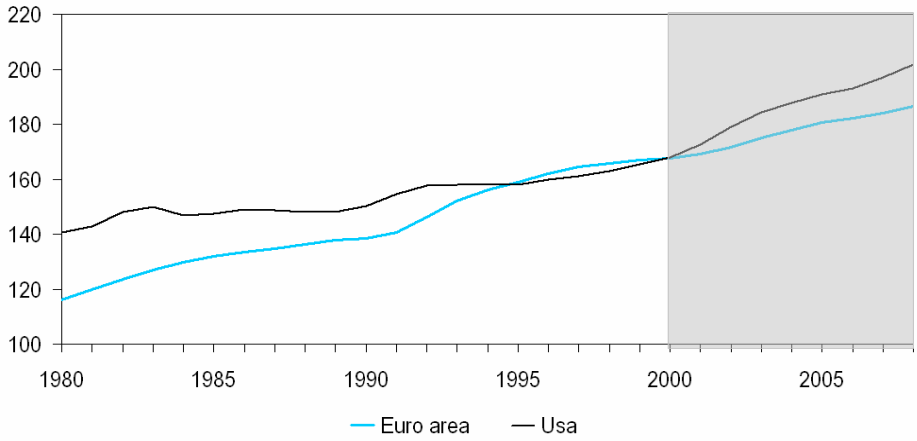
Speaking foreign language

At least:	one	English	two	three	None
EU25	56%	38%	28%	11%	44%
Luxembourg	99%	60%	92%	69%	1%
Slovakia	97%	32%	48%	22%	3%
Latvia	95%	39%	51%	14%	5%
Malta	92%	88%	68%	23%	8%
Lithuania	92%	32%	51%	16%	8%
The Netherlands	91%	87%	75%	34%	9%
Slovenia	91%	57%	71%	40%	9%
Sweden	90%	89%	48%	17%	10%
Estonia	89%	46%	58%	24%	11%
Denmark	88%	86%	66%	30%	12%
Cyprus	78%	76%	22%	6%	22%
Belgium	74%	59%	67%	53%	26%
Finland	69%	63%	47%	23%	31%
Germany	67%	56%	27%	8%	33%
Austria	62%	58%	32%	21%	38%
Czech Republic	61%	24%	29%	10%	39%
Bulgaria	59%	23%	31%	8%	41%
Greece	57%	48%	19%	4%	43%
Poland	57%	29%	32%	4%	43%
France	51%	36%	21%	4%	49%
Romania	47%	29%	27%	6%	53%
Spain	44%	27%	17%	6%	56%
Portugal	42%	32%	23%	6%	58%
Hungary	42%	23%	27%	20%	58%
Italia	41%	29%	16%	7%	59%
United Kingdom	38%	-	18%	6%	62%
Ireland	34%	-	13%	2%	66%

Response to the question: "Which languages do you speak well enough in order to be able to have a conversation, excluding your mother tongue?"

Source: Eurobarometer, 246, February 2006

CAPITAL INTENSITY: USA AND EUROLAND **Figure 6**



of capital per person employed. While TFP measures the quality of the capital stock and the labour force, capital intensity is an indicator for the quantity of capital employed per worker. If capital intensity is high, the productive capacity of workers is also high. Figure 6 shows that capital intensity has accelerated more in the United States than in Europe.

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Neoclassical growth theory argues that in the long run labour productivity will grow at the same rate as capital intensity, so that labour productivity is driven exclusively by TFP and structural factors. However, this argument applies only to the very long run for an economy operating at the technological efficiency frontier. In the real world of multiple productivity centres and strong sector diversification within countries, capital intensity matters for the determination of national labour productivities. As tables 3 and 4 show, CI has grown faster in the recent years than productivity, in fact more than twice as much. Thus, capital intensity is at least as important for labour productivity growth, if not more.

The average growth of Total Factor Productivity has slowed by half a percentage point, while the rate for capital intensity in the Euro area has fallen three quarters. For the EU15, the reduction in capital intensity is less with -0,57 percentage points, but it is still higher than the reduction of TFP (-0,39). In the large EU countries like Germany and Italy, capital intensity growth has fallen by more than 1 percentage point. Thus, the relative slow down of capital accumulation per worker must have been a major cause for the reduction of labour productivity over time and also with respect to Europe's relative competitive position in the world.

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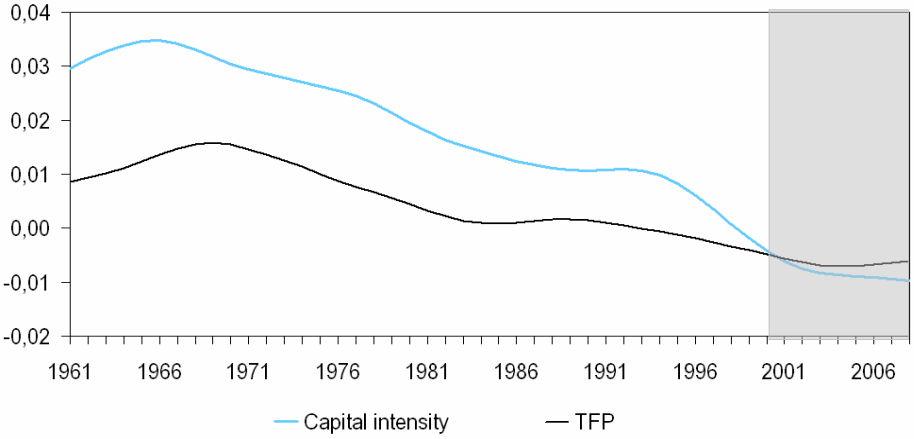
In a recent study, the European Commission (2007) has claimed that the main reasons for the slowdown in Europe's labour productivity were due to the slowdown of Total Factor Productivity and not of capital intensity. It therefore recommends the continuation of structural reforms, which - mysteriously - have not yet had the desired impact on TFP, but hopefully will have one in the future. Figure 7 shows the difference between the trend growth

DIFFERENTIAL BETWEEN EUROLAND AND USA: CAPITAL INTENSITY **Figure 7**



in Euroland and the USA for TFP and CI (5); it is evident that since Lisbon, Europe has been lagging behind the US not with respect to TFP, but to capital intensity. In recent years the differential between European and American capital intensity has increased more than the differential for Total Factor Productivity. While TFP used to favour Europe, the growth differential has turned negative exactly since the proclamation of the Lisbon Strategy. Thus, the Commission's claim cannot be sustained. Tackling the problem of the EU's productivity slowdown requires more than the pursuit of structural reforms. New policy thinking is needed. We must explain why CI has decelerated so much in the EU.

The role of capital accumulation

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When firms and public authorities invest in capital, they may do so by extending existing capacities (e.g. an additional factory with similar technology) or by improving the efficiency of the existing capital stock (e.g. replacing an old machine by one with new and better technology). The first kind of investment creates new jobs, the second increases labour productivity. The total rate of capital accumulation must be sufficient to accommodate the increases in CI as well as creating additional capacities for employing the growing labour force. In other words, only when the total capital stock grows faster than capital intensity, will new jobs be created.

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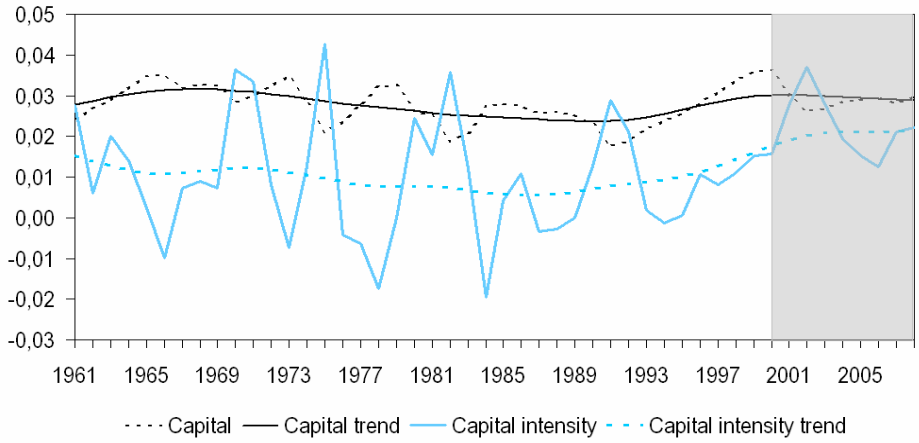
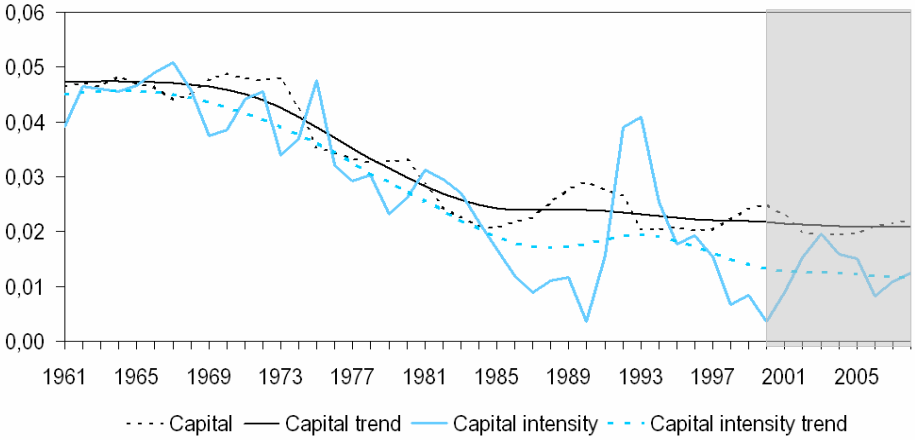
Figure 8 and 9 show the contrasting developments for the Unites States and the Euro area. In the US the growth rate of the total capital stock is fairly constant over the long run, fluctuating around 3 percent. In Europe capital accumulation was very high in the 1960 and 70s and then slowed down to just above 2 percent. Between the mid and late 1980s the two

(5) Figure 7 shows data from the Commission's AMECO data bank. Because the European Commission (2007) bases its claims on data from EUKLEMS series, we have checked this data base as well. The results are very similar.

CAPITAL ACCUMULATION: USA **Figure 8**



CAPITAL ACCUMULATION: EUROLAND **Figure 9**



continental economies accumulated capital at the same rate of 2,5 percent. During the Clinton years, the trend growth of the American capital stock rose to over 3 percent, while Euroland's fell further to nearly 2 percent. Although the growth of the American capital stock has been slower in the recent decade, it has remained at a higher level than in Europe. Capital accumulation in the United States was largely concentrated on increasing the capital stock per worker especially by improving the content of ITC investment. As a result, productivity increased and job creation was slowing down. In Europe capital intensity only accelerated in the early 1990 and then slowed down to 1-1,5%. The ITC content was only 1/3 of the USA (European Commission, 2007). The gap between the general rate of investment and capital intensity in Europe contributed to the more rapid job creation and the stagnation of productivity. Thus, the big difference between Europe and the United States is the dynamics of investment. It is high in America, overall and in terms of capital per worker, but in Europe it is low in both respects. If Europe wants to meet the challenge of the next decade, it must raise and qualitatively improve the overall rate of capital

accumulation *and*at the same time increase capital accumulation per worker. In this case it will improve employment as well as productivity.

Capital accumulation, productivity and employment

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Figure 1 showed that over the long run total factor productivity and capital accumulation evolve with similar trends. In this context it is of interest how capital accumulation and TFP influence each other, and how they both affect employment. For this purpose, we have estimated a VAR model (for details see Box 2: « Factors of production in the Euro area: a Var model analysis»). We find that capital accumulation has significant and positive long term effects on productivity and employment, which it tends to overshoot in the short-run (figures 10 a-b-c). An exogenous impulse of 2 decimal points of the growth rate of the capital stock raises TFP at first by 7 decimal-points, and employment by 5 decimal-points. The capital accumulation sustains its own dynamics, increasing by 1% after 6 years and subsequently stabilising at 1,3%. The effects of capital accumulation remain statistically significant for 14 years.

40

VAR models are sensitive to the ordering of the estimated variables. When we assume that capital accumulation dominates TFP, an assumption retained by the statistical test apparatus, then autonomous impulses from TFP on the other variables are inefficient. In other words, structural reforms undertaken under the Lisbon Agenda to improve TFP are only effective if they occur in a macroeconomic environment of accelerated capital accumulation.

Similarly, the effect of capital accumulation on employment is superior to the effect of TFP: capital growth explains 2/3 of the changes in employment against 14 percent for TFP. This analysis confirms the importance of capital accumulation as the dominant policy variable. To meet the challenges of the next decade, the European capital stock needs to grow faster.

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However, this poses the question to what degree capital accumulation creates employment, or simply increases the stock of capital per person employed. To clarify this issue, we first needed to know, which factors are driving investment, i.e. the addition to the capital stock.

The determinants of investments

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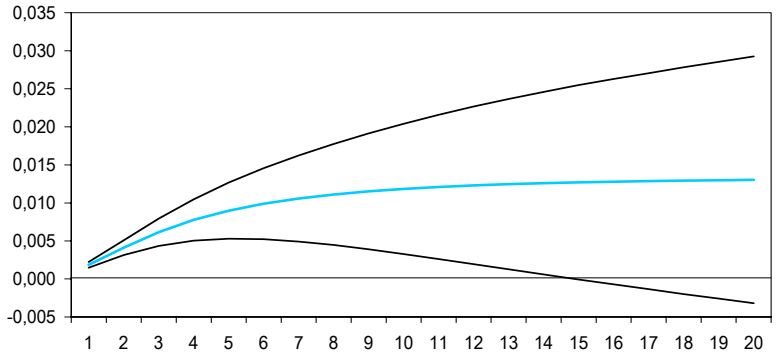
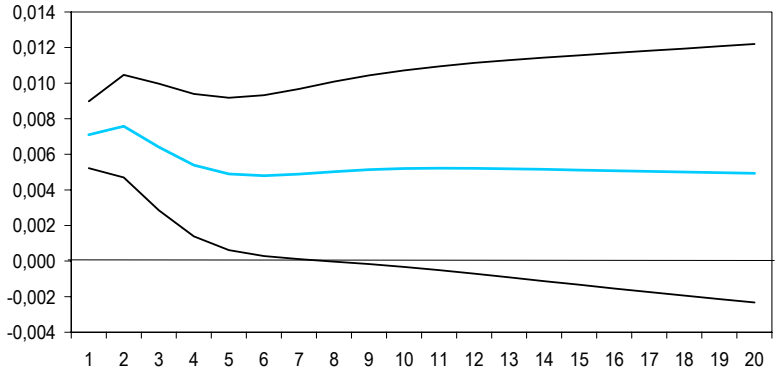
As we have seen in figures 8 and 9, the rate of capital accumulation has had a slowly deteriorating trend over the last two decades in Europe, while capital intensity has slowed down even more. In America, the growth of the capital stock has accelerated, but capital intensity even more, particularly during the Clinton years. In this section we will look at the factors that determine the average rate of investment; in the next section we will analyse the causes behind CI-growth. Note that we estimate investment, rather than growth of the capital stock, because the independent variables are all expressed as flows, and relating flows with stocks often causes econometric problems. In fact, the evolution of the capital stock and investment is very similar.

A. Response of capital to an impulse of capital **Figures 10**



B. Response of TFP to an impulse of capital



C. Response of employment to an impulse of capital

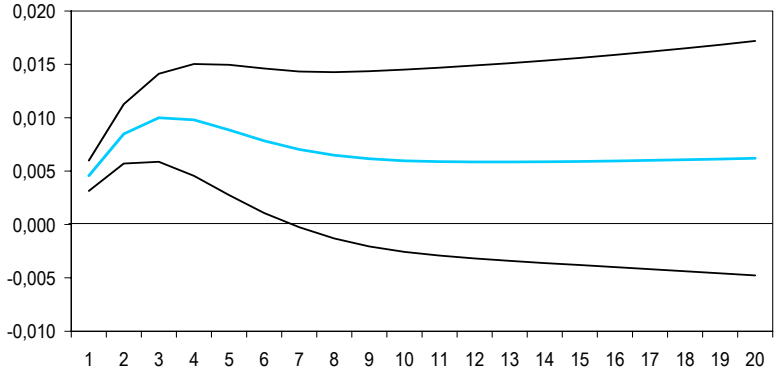


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Figure 11 shows the growth rate of net investment (gross fixed capital formation minus depreciation). The trend increase in the United States during the 1990s is impressive; in Europe it is hardly perceptible. What determines the investment function?

Macroeconomic theory considers two major mechanisms that determinate the attitude of enterprises to invest::

- The costs of investment, mainly real interest rates and the depreciation rate of

FACTORS OF PRODUCTION IN THE EURO AREA: A VAR MODEL ANALYSIS

In this box we approach European productivity trends from the supply side in a macroeconomic framework, estimating the relationship between each factor of a classic production function: Capital (K), Labour (L) and Total Factor Productivity (TFP). We estimate a Var model to catch their «role and impact effect»: the main objective is to understand the relative importance of K and TFP in boosting productivity growth and in creating employment.

Typically, in a Var estimate there is an issue of «identification» concerning the distribution of each innovation (i.e. the residuals of each equation in the model) among the endogenous variables. If residuals of equations are uncorrelated to each other, the problem would be easily solved assigning each innovation to the relative dependent variable. Nonetheless, innovations are often correlated, so that common components of innovations exist that cannot be assigned to a single variable. In this case, the problem is usually solved by - automatically and arbitrarily - applying the «Cholesky decomposition» that orthogonalises errors to get a diagonal covariance matrix: consequently the innovation of the first variable in the Var sequence gets all the common components. This practice tends to «accrue» the relative importance of the first variable in the analysis of impulse-response analysis and variance decomposition.

In our exercise, following theoretical considerations and some first estimation results, we placed Labour at the end of the Var sequence. A more complicate issue is to assign K and TFP to their respective positions: the two possible orders both results in a «virtuous» model, but are characterized by a different «leader» variable. As we discuss in the main text, impulse-response analysis in the two alternative models, suggests that policy action (on TFP and K) can be effective in boosting growth. But this analysis does not explicitly clarify the causality nexus among variables. In fact this analysis does not permit to choose between a model more «oriented» to K and a model more «oriented» to TFP.To solve this problem, we then turn to the variance decomposition analysis of the three endogenous variables in the two models. The idea is to have a measure

VARIANCE DECOMPOSITION **Table A**

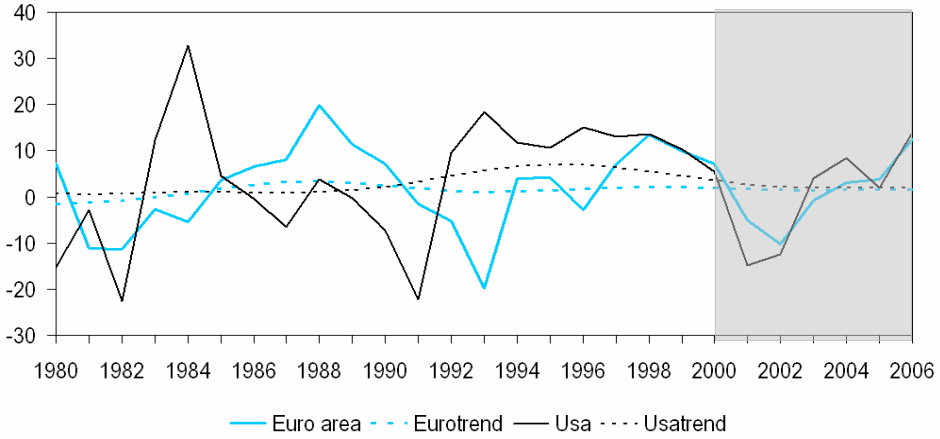
		Model K due to		Model TFP due to	
Variance of	quarters	K	TFP	K	TFP
K	5	99,5	0,1	22,4	77,2
	10	98,5	0,8	30,5	68,8
	15	96,3	2,3	36,5	62,1
	20	93,6	3,9	40,9	56,6
TFP	5	79,3	15,3	2,4	92,3
	10	83,6	10,5	6,4	87,8
	15	87,6	7,9	11,5	84,0
	20	89,5	6,8	16,7	79,6
L	5	76,0	1,5	23,4	54,0
	10	70,8	8,8	38,7	40,9
	15	67,6	12,5	45,1	34,9
	20	66,5	14,1	48,5	32,0

of the relative importance of each innovation with respect to the analysed variable. Table A. of this box reports, for the two models (K-model and TFP-model), the part of the variance explained by K and by TFP for each of the endogenous variable included in the Var (K, TFP and L). The result suggests a relative «predominance» of the K-model. In fact: In the K-model Capital is «more exogenous» than Total Factor Productivity in the TFP-model: after 20 years, in the first model, 93,6% of Capital variability is explained by its own innovations; in the second model, less than 80% of the TFP variability is explained by its own innovations.

- Controlling for respective influences, we found that in the K-model Capital influences Total Factor Productivity more than the vice versa in the TFP-model: after 20 years, in the first model Capital innovations explain nearly 90% of TFP variability; in the second model, the opposite is true for less than 60%.

- Considering labour variability, the influence of Capital is higher both in the K-model and in the TFP-model: more precisely, in the long run, Capital innovations in the first model explain 2/3 of Labour variability and the TFP innovations only 14%; in the second model, this quotas are respectively of 48% and 32%.
In conclusion, the Var estimate suggests a more significant role for Capital accumulation than for TFP dynamics in determining evolutions of the production factors.

NET INVESTMENT GROWTH IN EUROLAND AND USA: ACTUAL AND TREND **Figure 11**



capital, relative to profits, and in some cases also real wages, as indicators of attitude to substitute labour by capital.

- GDP or its mains components of current aggregate demand, as a proxy of future demand (known as accelerator mechanisms). The most relevant components are consumption as an indicator of domestic demand and exports.

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Table 9 gives the results of our estimates (for the econometrics, see Box 3: «The investment function»). The equations for the Euro-area and the Unites States confirm that both components of demand (the accelerator effect) and the costs of capital (specifically the real interest rates and depreciation) determinate the dynamics of investment in the long run. In the short run neither the cost of capital nor labour seem to matter in Europe. However, remember that the adjustment is very fast in Europe, while it is slower in the US, where the capital costs lower investment in the short rum as much as they do in Europe over the long run. Interestingly, there is some evidence that real wages are positively correlated with investment in America. But if we look at the last decade, we observe that values of real interest rates in the Euro-area and in the Unites States are very close: accordingly, it is the difference in the accelerator mechanism, i.e. the economic growth rates of GDP, and in particular consumption, that mostly explain the lower dynamic of investment in the Euro-area.

Wage bargaining and investment

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In the last section we observed that at least in the United States, real wages enter the investment function with a positive coefficient. Hence, higher real wages increase investment. But for a given level of productivity, higher real wages imply lower profits. It is therefore not obvious, why higher real wages should increase investment. There are two explanations: (1) Higher wages may increase consumption and this activates the accelerator mechanism. This may well have been the case in Europe, according to the estimates in table 9, although we need to check whether this mechanism has been important. (2) Higher wages may cause the

THE INVESTMENT FUNCTION Table 9

	EURO AREA		UNITED STATES							
	Gross investment (Eq_1)		Gross investment (Eq_2)		Nets investment (Eq_3)		Gross investment (Eq_4)		Nets investment (Eq_5)	
LONG-TERM										
Constant	-2,7	(**)	0,1		-1,0	(**)	-0,5	(**)	-1,1	(**)
Speed of adjustment	0,9	(**)	0,3	(**)	0,3	(**)	0,1	(**)	0,3	(**)
Gdp	1,2	(**)			1,1	(**)	1,3	(**)	1,0	(**)
Private consumption			0,5	(**)						
Export			0,4	(**)						
Long-term real interest rate	-0,5	(**)	-2,6	(**)	-3,6	(**)	-1,2	(**)	-2,9	(**)
Net returns on net capital	0,1	(**)								
Depreciation rate	-0,7	(**)								
SHORT-TERM										
Investiments (-1)			0,3	(**)	0,2	(**)	0,2	(**)	0,3	(**)
Gdp	2,0	(**)			5,2	(**)	1,3	(**)	4,5	(**)
Private consumption			2,8	(**)						
Export			0,1	(**)						
Long-term real interest rate			-1,1	(**)						
Depreciation rate							-0,8	(**)		
Real wage							0,4	(**)	1,4	(**)
Dummies: 1975, 1981, 1984			X	(**)						
Dummies: 1991									X	(**)
Adjusted-R2	0,90		0,93		0,84		0,94		0,88	
Test of Durbin-Watson	1,88		1,99		1,79		1,86		2,16	

(**) Coefficients statistical significant at a level of probability of 5%

substitution of labour by capital and this may cause higher investment per worker employed. It is possible that this effect is caught by the US estimates in table 9, but crowded out by the accelerator effect in Europe. We will therefore now study the impact of real wages on the capital intensity. This issue is also relevant with respect to our question, which factors determine increases in productivity through higher capital intensity and whether investment will enlarge existing capacities or increase their efficiency.

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Standard economic theory argues that firms substitute labour by capital (i.e. they increase capital intensity), if labour becomes expensive relative to capitals. Thus, if capital intensity has increased more rapidly in the US than in Europe, it must be explained by the relatively larger increase in labour cost and/or cheapening of capital in the United States. This hypothesis is confirmed by the empirical data. Real wages started to rise in the mid 1990's in the US, but have remained stagnant in the European Union. While real wage increases tend toward zero in Europe, they have gone up to 3% in the US (figure 12).

THE INVESTMENT FUNCTION

We have regressed gross investment (INV), or investments minus depreciation (INVN=INV-AMM) on a set of variables that include:
- aggregate GDP and its main components – private consumption (CON), export (EXP) and import (IMP) – all expressed in real terms;
- real wages (WPR), expressed as an index number (index=100 in the 2000);
- real net returns on net capital stock (SPR), as a proxy for profits rate, expressed as a index number (index=100 in the 2000) and deflated using the GDP deflators;
- interest rates, either long-term (RLU) or short-term (RBR), deflated using the GDP deflator;
- consumption of capital (AMM), expressed in real terms for the United States and deflated using the investment deflator for the Euro-area.

All the series are extracted from the Ameco database; frequency is annual. We estimated investment for the whole period covered in the Ameco database: 1960-2006 as no structural breaks can be detected.

As a functional form, we used the unrestricted form of the Error Correction Models (ECM), which permits to estimate long-term and short-term elasticities simultaneously, and the speed of the adjustment to long-term equilibrium (percent of the gap between the effective and the equilibrium values covered in the subsequently year). We use the ratio of capital consumption to investments as a proxy for the depreciation rate of capital.

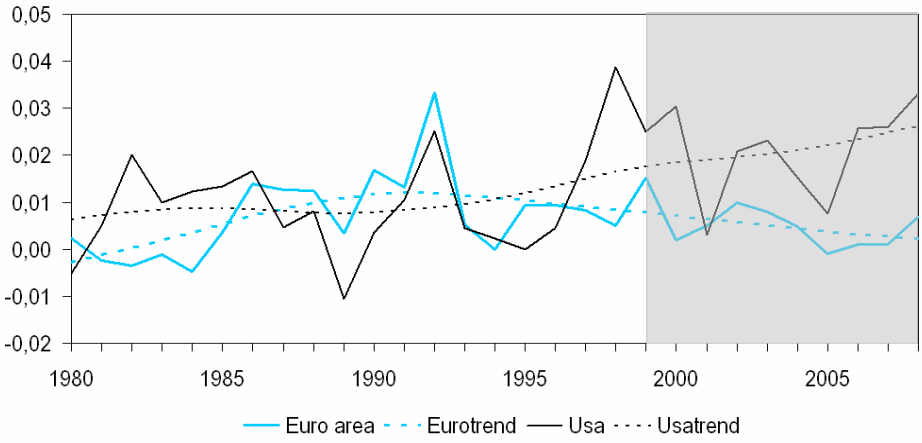
The equation for the Euro-Area (Equation 1 in Table 9 of the text) indicates a long-term correlation of investment with GDP, long-term real interest rate, depreciation rate of capital and profits. While the speed of adjustment to equilibrium values is strong (90% yearly), the short-term dynamics are quite poor: only GDP is statistical significant. The low relevance of short-term adjustment is confirmed by cointegration tests, which indicate the presence of four or five vectors of cointegration (note that when the number of the vectors of cointegration equals the number of variables, variables do enter in the functional form only in levels). Moreover, the value of adjusted-R^2 shows that the equation fits the data well, and the value of the Durbin-Watson test, as well graphic inspection, indicate that there are no signs of autocorrelation in the residuals. Finally, tests on recursive residuals show that the equation is stable over the whole period; specifically, the introduction of the euro-regime does not seem to have made significant changes in the values of coefficients.

The equation of investment for the United States (Equation 2) indicates a long-term correlation of investment with consumption, exports (the sum of the two long-run elasticities is 0,9, slightly inferior to the value of GDP in the Euro-area), and long-term real interest rates (for the latter, the coefficient is much higher than in the Euro-area). The cointegration test confirms the presence of one vector of cointegration. Compared to the Euro-area, speed of adjustment to equilibrium values is lower (30% yearly), but the short-term dynamics are more complex: the three variables determining the long-run dynamics of investment are also relevant in the short-term, together with the one-period lag of the growth rate of investment. Moreover, the specification estimated includes three dummies for the years 1975, 1981 and 1984. The values of adjusted-R^2 and of Durbin-Watson, as well the graphic inspection of residuals and tests of stability, are all satisfactory.

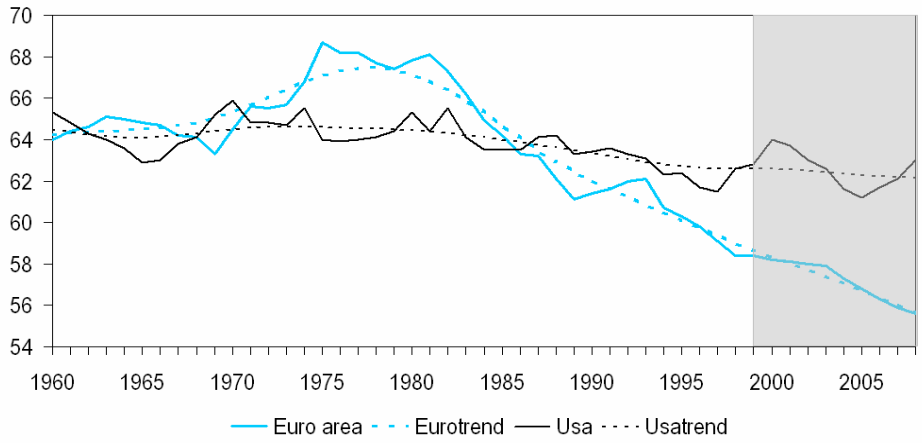
Because the depreciation rate is not statistically significant in this specification, we also estimated the net investment function (Equation 3). Here, a long-run relation emerges between investment and GDP (with an elasticity only slightly grater than one) and the long-term real interest rate (but with a coefficient firmly higher than in the previous specification). The speed of adjustment, instead, is the same (30% per year). Regarding the short-term, we find high elasticity with respect to GDP, and a significant one-period lag of the growth rate of investment (the coefficient of which is slightly lower than the previous specification). In this case, all the usual tests are satisfactory.

Finally, we observe that short term real interest rates are never significant. Moreover, only in the United States do we find specifications of the investment function that include the real wage, specifically Equation 4 and Equation 5. Note that in both cases the sign of the coefficient of real wages is positive: as a matter of fact, an increment of wages has a positive effect on capital formation through two channels: it drives the substitution of labour with capital (deepening capital intensity), and it induces stronger consumption, which influences investments thorough the accelerator mechanism. From a statistical point of view, however, the two equations that include real wages are less stable than the previous specifications.

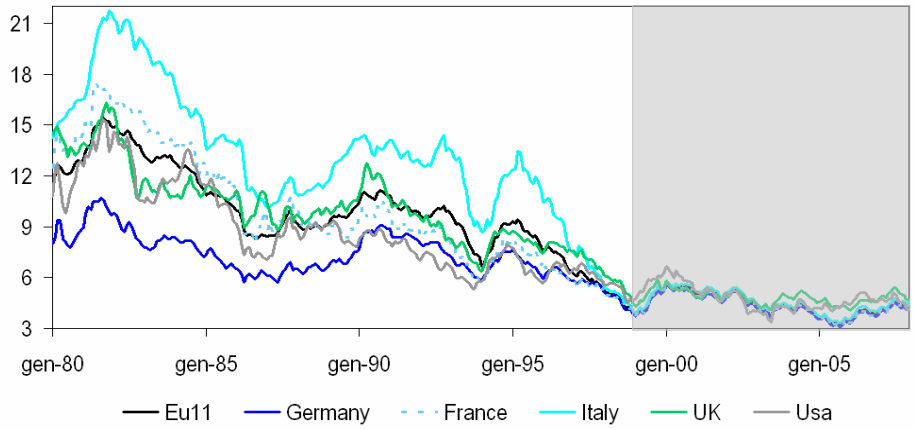
REAL WAGE INCREASES: USA AND EUROLAND **Figure 12**



ADJUSTED WAGE SHARE: EUROLAND AND USA **Figure 13**



10 YEAR GOVERNMENT BONDS **Figure 14**



A similar picture appears when one distinguishes between high-skilled and low-skilled wages. Since the mid 1990's low-skilled hourly real wages in the US and the Euro area have increased only marginally, while high-skilled wages have gone up by more than 20%

in the United States and hardly at all in Europe (see ECB, 2008: 82).

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However, we must be careful to distinguish cause and effects. Real wages in the US may have gone up because labour productivity has increased, and remained stagnant in Europe because of little progress in productivity. In order to clarify this issue we have tested the relation econometrically. We find that Granger-causality tests clearly indicate that CI follows increases in real wages. In the long run, capital intensity increases by a deterministic trend of 1,3 percent, while a one percent increase in real wages adds another 0,8 percent. A 1% increase of capital depreciation (an important element of the cost of capital) lowers capital intensity growth by 16 percent. In the short run, a 10 percent increase in real wages increases the CI-growth rate by 2,4 percentage points, but in the long run deviations from equilibrium will be corrected, although only slowly: it takes approximately 10 years to reduce the deviation by one half. See Box 4: «Capital intensity and labour cost».

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A look at the evolution of the wage-share (figure 13) confirms these results. If real wages increased at the same rhythm as productivity, the wage-share would remain constant. This seems to have been by and large the case in the US, where the wage-share fell only marginally. However, in Euroland real wages have persistently lagged behind labour productivity and as a consequence the wage-share has fallen rapidly. In other words, nominal wages largely follow the rate of inflation and productivity in the US. In Europe, wage restraint has lowered the cost of labour and increased the distributive share of capital. As a consequence labour has become cheaper and firms felt less pressure to increase the capital intensity of their production. Hence, productivity slowed down, while employment increased. But interestingly, the higher profit margin has not caused the total capital stock to grow faster. Firms have not extended their productive capacities significantly. We need to analyse why?

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There are two explanations for the paradox of rising profit margins and lower investment: (6).

1. High interest rates may have deterred investment or diverted it into financial or foreign assets (7).
2. Low consumption by households did not offer attractive market conditions for firms to sell more.

Interest rates can hardly be blamed. Monetary conditions have significantly eased in the world over the recent decade (see below the section on monetary policy) (figure 14). In Europe ten-year government bond yields have fallen continuously between 2000 and 2005, while they started to rise in the United States already in 2003. Even if they were creeping up in the Euro area after 2005, they have remained below the US level until the aggressive rate cutting by the Fed after the sub-prime crisis in 2007. Thus, the low rate of capital accumulation cannot have been caused by tight monetary conditions and we can discard the first explanation. This leaves us with the second argument.

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(6) See also Blanchard and Philippon, 2003.

(7) However, note that globalization and «delocalization» have not hindered American entrepreneurs to accumulate capital in the USA.

CAPITAL INTENSITY AND LABOUR COST

In this box we estimate the relationship between capital intensity and labour cost in Europe. A first step is to investigate the causality nexus between the two variables over the 1960-2008 period, applying the traditional Granger methodology: the results of the test, reported in table A., suggest that, in the Euro area, the level of the real wages (RW) causes the Capital/Labour ratio (KL) and not vice versa.

GRANGER TEST **Table A**

Pairwise Granger Causality Tests			
Sample: 1960 2008			
Lags: 3			
Null Hypothesis:	*Obs*	*F-Statistic*	*Probability*
	46		
LOG(RW) does not Granger Cause LOG(K/L)		3,50848	0,02404
LOG(K/L) does not Granger Cause LOG(RW)		0,90107	0,44938

Starting from this result, we build a regression based on the error correction model. We follow a two stage procedure, first estimating the equilibrium relationship in the long run (on levels), and then estimating the short run dynamics (building on the residuals of the first stage). The first estimation results are reported in table B:

THE EQUILIBRIUM RELATIONSHIP **Table B**

Dependent Variable: LOG(K/L)				
Method: Least Squares				
Sample (adjusted): 1961 2008				
Included observations: 48 after adjusting endpoints				
White Heteroskedasticity-Consistent Standard Errors & Covariance				
Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
C	-5,123325	0,14121	-36,28086	0,0000
LOG(RW)	0,762126	0,02567	29,68754	0,0000
@TREND(60)	0,012860	0,00075	17,13610	0,0000
DELTA	-0,161369	0,02612	-6,17869	0,0000
R-squared	0,997146	Mean dependent var		-2,205770
Adjusted R-squared	0,996951	S.D. dependent var		0,340397
S.E. of regression	0,018796	Akaike info criterion		-5,030734
Sum squared resid	0,015544	Schwarz criterion		-4,874800
Log likelihood	124,738	F-statistic		5.123,837
Durbin-Watson stat	0,253051	Prob(F-statistic)		0,000000

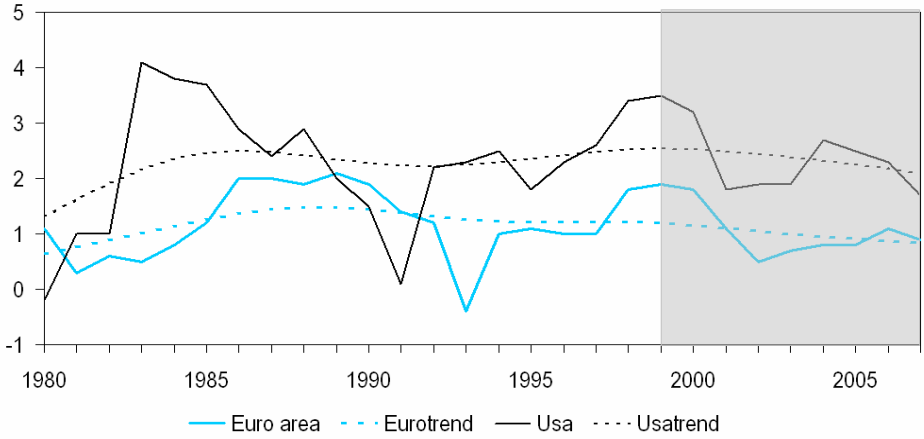
In the long run, apart from the time trend (that determines 1,3 % growth per year), capital intensity reacts positively to an increase in the real wage (a 1% wage push leads to an increase of 0,8% in the K/L ratio) and negatively to an increase in the depreciation rate of the capital stock (Delta) (which is part of capital cost). The equation residuals «pass», the Dickey-Fuller Unit root test at a level of 95%, and can therefore be used for the short run dynamics (table C).

ERROR CORRECTION MODEL **Table C**

Dependent Variable: DLOG(K/L)				
Method: Least Squares				
Sample(adjusted): 1962 2008				
Included observations: 47 after adjusting endpoints				
White Heteroskedasticity-Consistent Standard Errors & Covariance				
Variable	***Coefficient***	***Std. Error***	***t-Statistic***	***Prob.***
C	**0,002503**	**0,001304**	**1,919845**	**0,0617**
ECM(-1)	**-0,088971**	**0,033940**	**-2,621449**	**0,0121**
DLOG(K(-1)/L(-1))	**0,649876**	**0,085376**	**7,611958**	**0,0000**
@YEAR=1992	**0,020467**	**0,000974**	**21,02285**	**0,0000**
DLOG(RW(-1))	**0,245134**	**0,052615**	**4,659025**	**0,0000**
R-squared	**0,924260**	**Mean dependent var**		**0,024478**
Adjusted R-squared	**0,917047**	**S.D. dependent var**		**0,014888**
S.E. of regression	**0,004288**	**Akaike info criterion**		**-7,965724**
Sum squared resid	**0,000772**	**Schwarz criterion**		**-7,768900**
Log likelihood	**192,1945**	**F-statistic**		**128,133000**
Durbin-Watson stat	**1,952930**	**Prob(F-statistic)**		**0,000000**

In the short run, capital intensity responds strongly to an increase in real wages; it absorbs 1/4 of the changes in real wages. It also has an important autoregressive component, which get corrected over time: the long run component (ECM) gets into the regression with the expected sign, but its coefficient is particularly low, suggesting a very long «adjustment» period.

CONTRIBUTION OF PRIVATE CONSUMPTION TO GDP GROWTH **Figure 15**



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Private consumption by households has made a significantly lower contribution to economic growth in Euroland than in the US (figure 15). There were therefore fewer opportunities for investment to expand potential output in the EU than in the USA. Because consumption depends to a large degree on wage income, the low rates of capital accumulation in Europe cannot be divorced from the near stagnation of real wages. This is the essential difference with the «trente glorieuses» (1950-70s), when European real wages, capital accumulation and employment all advanced at a rapid pace.

The problem with falling purchasing power of European households is twofold: nominal wage increases have not exhausted the margins of price stability-compatible redistribution, i.e. they have on average remained behind the increases of productivity plus inflation target. Thus, wage restraint by social partners has kept income low. But at the same time there remains the problem of low productivity growth. When productivity advances only by ½ percent a year, like in Italy, standards of living are effectively stagnating. If the ratio of active to retired population is falling due to democratic changes, after-tax income of wage earning households is reduced. Sustainable improvements of living standards and purchasing power require high productivity.

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In the recent decade, structural reforms have made low-skilled labour at the low-wage end of the labour market more employable and this is a good thing. Real wages for unskilled labour have remained stagnant, in Europe as in the United States (European Central Bank 2007). But these reforms have not helped to create conditions for the rapid accumulation of capital. If Europe wants to regain economic dynamism, it does not only need to continue with structural reforms aimed at increasing Total Factor Productivity as the European Commission claims; it must also increase the purchasing power of households, which create business opportunities for firms to sell more. In other words, macroeconomic management needs to be brought back into the new Lisbon II Strategy.

52 The major challenge for macroeconomic management in the next decade is to increase the purchasing power of households, while keeping interest rates down. This requires concertation of fiscal and income policies with the stability orientation of monetary policy. European monetary union has consolidated and improved the monetarist side of macroeconomic policy. Disruptive shocks to prices, exchange and interest rates have been minimised. Prices are broadly stable despite shifts and tensions in the relative price structure (notably for sectors like energy and food, or between member states).

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Even if monetary integration has greatly improved the framework for macroeconomic policy, the interaction of the different policy domains is far from perfect. The budgetary framework does not allow fiscal policy to do more than blind rule-following - but, not surprisingly, hardly any actor complies. Wage bargaining in Euroland is dominated by national institutions and prevents the optimal interaction with other policies. The effect of all these incomplete institutional arrangements is a suboptimal policy mix which restrains Euroland's economic growth. In other words, the construction of the European house is unfinished; to regain economic dynamism, the work needs to be completed. Below, we shall propose, how this could be done. But first we need to look at the three macroeconomic policy domains.

Monetary policy

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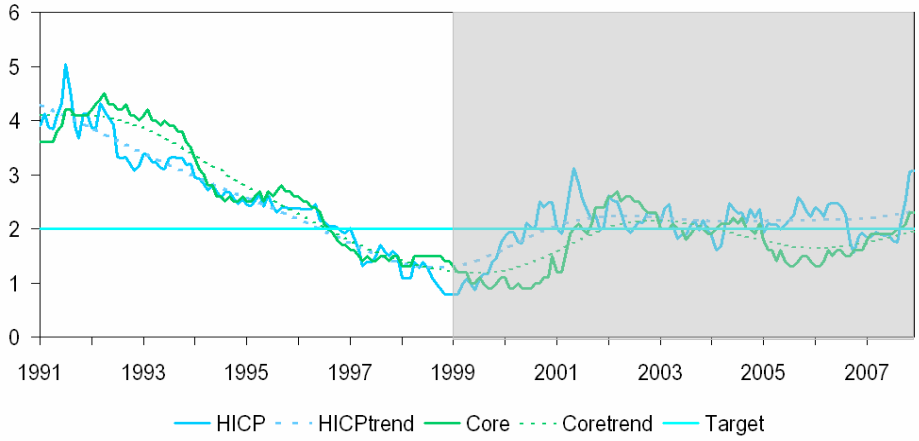
Maintaining price stability is indispensable for long term economic growth. It is a necessary condition for preserving social justice, as inflation distorts relative prices, lowers real wages and shifts the burden of taxes between generations and penalises low income classes. In a monetary market economy, price stability guaranties that individuals are willing to hold part of their wealth in the form of financial assets; it also ensures that firms produce additional income in order to service the debt obligations they have contracted, rather than speculate on increases in asset prices. If inflation rises to a level where real interest rates become negative, this is no longer the case, financial bubbles develop and ultimately the monetary economy becomes dysfunctional, (8) This is why the Central Bank needs to be independent, so that it can make sure that expected real interest rates remain positive in the medium and long term.

55
The experience with monetary union since 1999 has been positive. The European Central Bank has been successful in achieving the inflation target of 2 percent HICP-inflation. Figure 16 shows the record. The overall rate of inflation as measured by the Harmonised Index of consumer Prices (HICP) has been stable at a level slightly above the 2 percent mark. This index includes food and energy prices, which are subject to exogenous shocks and

(8) Of course, short term real interest rates may temporarily turn negative in response to economic shocks. But if negative real rates became a feature of long term expectations, the market economy would disintegrate because investors would no longer wish to hold a portion of their wealth in financial assets.

INFLATION IN EUROLAND **Figure 16**



DESCRIPTIVE STATISTICS INFLATION EURO AREA AND USA **Table 10**

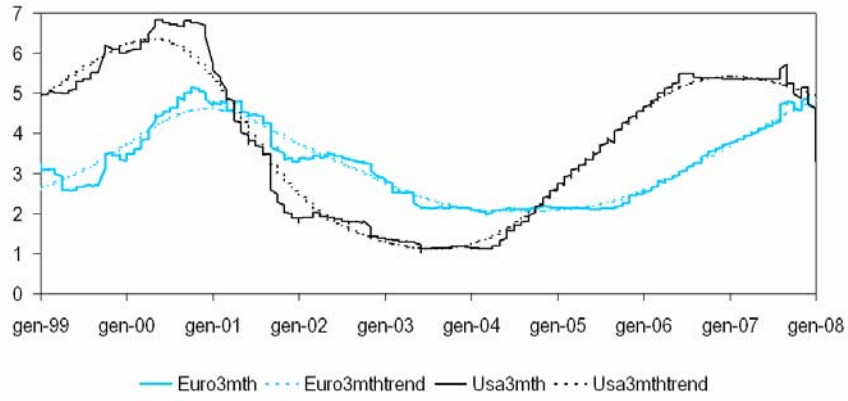
	Europe	Europe Core	Usa
Mean	**2,0593**	**1,7259**	**2,6724**
Median	**2,0938**	**1,9000**	**2,6371**
Maximum	**3,1229**	**2,7000**	**4,5849**
Minimum	**0,7857**	**0,9000**	**1,0635**
Std. Dev.	**0,4531**	**0,4951**	**0,8003**
Skewness	**-0,7034**	**-0,0788**	**0,0985**
Kurtosis	**4,1140**	**1,9856**	**2,3239**
Jarque-Bera normality test	**14,4896**	**4,7422**	**2,2314**
Probability	**0,0007**	**0,0934**	**0,3277**
Observations	**108**	**108**	**108**

therefore not under control of the ECB. A better indicator for the success of monetary policy is an index that excludes these items. We find this index more variable over the medium term, but its mean at 1,7 is well below the 2 percent target. Furthermore, inflation is also lower, more stable and more predictable in Europe than in the USA. The US CPI-inflation mean has been 30% higher than in the Euro area and the standard deviation nearly double. In Euroland there is a probability of 95% that inflation will remain within the range of -1,2 and +3 percent, while in the USA it is in the range -1,1 to +4,3 percent. Expectation errors are normally distributed in the Euro area, while they are downward biased in the US, meaning that American expectations have systematically been lower than realisations (table 10).

56

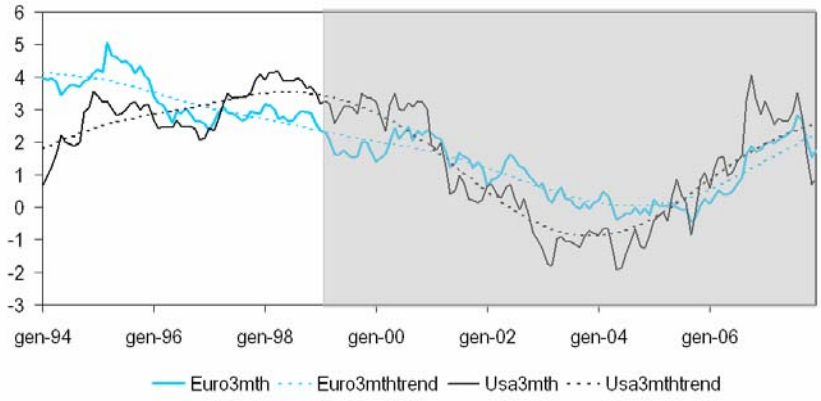
The relatively benign inflation of the last decade has allowed monetary policy to be rather accommodating. After the inflationary pressures of the 2000 boom were broken, interest

SHORT TERM NOMINAL INTEREST RATES: EURO AND USA **Figure 17a**



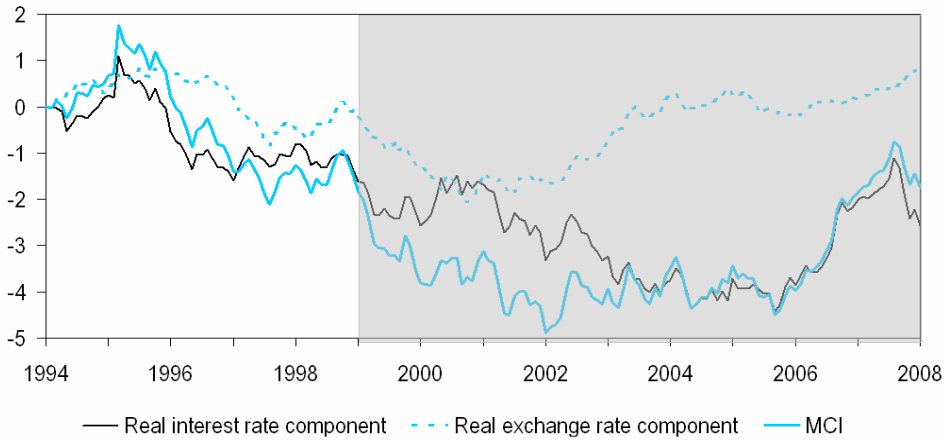
REAL SHORT TERM NOMINAL INTEREST RATES: EURO AND DOLLAR **Figure 17b**

(3 month maturity, monthly value)



rates have come down to historically low levels (figure 17a-17b). From early 2003 to late 2005, nominal short term rates hovered only marginally above the inflation target. Real short term interest rates have continuously fallen from the mid 1990s until 2004/5, when they approached the zero level. Only when inflation started to accelerate (see the price index net of food and energy in figure 16), did the ECB react and raise interest rates. Compared to the policy pursued by the Federal Reserve System in the United States, European monetary policy has been less active. It is possible that the slow responsiveness by the ECB to the bursting bubble of internet assets in 2001 and September 11 has contributed to the subsequent growth deceleration in Euroland. Abstaining from policy activism may have meant that monetary policy did «too little too late». But this stability orientation has also avoided higher interest rates in boom periods and excess liquidity (negative interest rates) in times of slow down. By contrast, the Fed has accepted negative real short term interest rates from the mid 2002 to mid 2005 and this has undoubtedly stimulated the American asset bubble. Notably in the housing market, portfolio holders found it more advantageous to borrow at low interest rates and buy real assets, which they expected to appreciate in value.

MONETARY CONDITIONS INDICATOR: EURO **Figure 18**



57

The financial market crisis in 2007 has confronted European monetary policy with a dilemma. Inflationary pressures have increased (figure 16), while tensions in the money markets require central banks to increase the provision of liquidity. The ECB has repeatedly pumped liquidity into the market, thereby dampening the volatility of the overnight interest rate (EONIA) and calming the markets. But the ECB rate for main financing operations has remained unchanged since June 2007. Over the same time, US rates have been cut aggressively, becoming strongly negative in real terms again. Should the ECB follow the American example? The inflation shock in January 2008 (inflation rose to 3,2%, the highest value since monetary union started) is outside the usual 95% probability range and signals the need for more restrictive policies. But the slowdown of the world economy may dampen demand anyhow. The question is, to what extend will the European economy be affected by American developments? Only if Europe's slowdown were caused by a negative demand shock would lowering interest rates be justifiable. If the price shock were caused by on-off events on the supply side (bad harvests, etc), the ECB should not react. But durable supply shocks, like permanently higher energy prices, would require shifts in demand patterns, which will only take place if the monetary budget constraint is hard and binding. This would justify restrictive policies. The ECB's prudent policy stance is coherent with its behavioural pattern of the last 9 years. However, this needs to be seen in the context of other macroeconomic policies, notably exchange rate developments and fiscal and income policies.

58

The strength of the euro relative to the dollar has been a cause for concern for the export sector, although it has had beneficial effects for import prices. However, the exchange rate is overblown in the policy debate. Foreign trade dependency of the Euro area is hardly more than 10-11% of GDP, and the effective real exchange rate has appreciated less than the euro-dollar rate. Figure 18 shows that the dollar strength of the last two years has only marginally contributed to the tightening of monetary conditions.

59

Given its low degree of opening, the Euro-economy is essentially dependent on domestic demand; it is the policy mix between interest rates, fiscal policy and wage developments that decides the long term GDP growth perspective. Economically uneducated politicians, who blame the European Central Bank for the dollar exchange rate, but pursue uncooperative policy within Euroland, are harming the welfare of all European citizens.

60

Among academics the ECB has often been criticised for lacking transparency. Now, it may be understandable that economic researchers would like to know what is going on when the bank makes decisions on monetary policy, but it is not clear that this would increase the overall credibility of the ECB. Publishing internal records would reveal potential conflicts between decision makers and make the bank vulnerable to sensational speculation by the media. The best way for building credibility is for the bank to say how it will respond to threats to price stability in the given economic environment and then act in a coherent way. By and large, this is what has happened over the last 9 years.

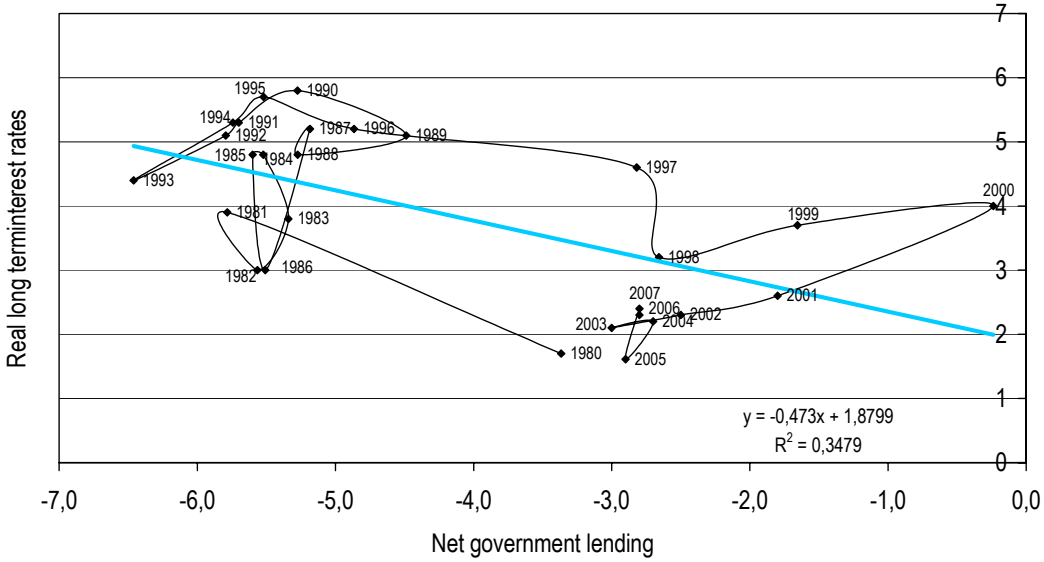
61

The European Central Bank has emphasised in recent month that it is concerned and vigilant with respect to the behaviour of social partners and so-called second round effects, when wage bargainers try to recuperate purchasing power losses after negative price shocks. Inflationary pressures may arise from the supply side when unit labour costs increase by more than the ECB's inflation target. This would occur if the wage bargainers agreed on nominal wage increases in excess of the sum of productivity increases plus the inflation target of the central bank. Such behaviour would force the ECB to raise interest rates, thereby slowing down capital accumulation and employment growth. Monetary policy may accommodate occasional non-persistent shocks when the overall inflation rate is close to the inflation target, but hardly in the present environment of excessive price deviations from the target. In principle, the central bank should also lower interest rates if inflation remains below the inflation target, but in reality the ECB has preferred to free-ride on social partners' wage restraint. This is where a constructive dialogue between monetary and political authorities is required.

62

However, such dialogue does not alter the fact that the ECB must be a hard and credible inflation fighter. One may be tempted to argue, that given certain exogenous shocks (such as energy or food prices), the ECB should raise its inflation target. This would be a mistake. For once inflation expectations are starting to creep up, yields on bonds would also shoot up and the bond market would crash. In the present environment of financial instability, this is not desirable. If inflationary pressures subside and the economy slows down, it would be appropriate to bring the yield curve over the whole range of maturities down. Furthermore, backward indexation of wages to compensate for lost purchasing power would cause a wage-price spiral that sooner rather than later would destroy the favourable growth

EUROLAND POLICY MIX **Figure 19**



environment. The lessons from the laxity in the 1970s and the long and painful process of disinflation in the 1980s and 90s should not be forgotten.

Fiscal policy

63

If monetary policy has a coherent institutional framework, this cannot be said about budget policy. This fact is one of the major obstacles to sustained accelerated growth. Fiscal policy necessarily interacts with monetary policy. It has two transmission channels through which it may affect the equilibrium level of interest rate. First, if the central bank controls and constrains the creation of liquidity, which it must do by definition, excessive deficits by public authorities may compete with private borrowers in the capital market and push long term interest rates up. This is the familiar crowding-out effect. But, second, there can also be a negative effect on short term interest rates in the money market. Deficits create additional demand for goods and services. This may be useful, from a Keynesian point of view, if the economy is in recession. However, public deficits are «excessive» when additional demand exceeds potential output, so that inflationary pressures emerge. In this case the Central Bank has to raise interest rates and mop up the excess demand.

64

Both effects contribute to a negative trade off between budget deficits and monetary policy. In equilibrium, a high deficit requires high interest rates. The classical example is the Reagan-Volker policy mix in the early 1990's in America. A different equilibrium policy mix is a combination between low surpluses and low interest rates. This was the Clinton-Greenspan policy mix. Our argument is that the Clinton-Greenspan equilibrium is more conducive to capital accumulation. If such policy mix is combined with wage policies that exhaust the distributive margin of productivity increases plus the inflation target, then such a policy mix will

cause rapid, inflation-free economic growth with active job creation and rising productivity.

65

Figure 19 shows the European policy mix between monetary and fiscal policy. The downward sloping trend line represents the negative trade-off between high deficits and high interest rates. Positions on this line are efficient policy mixes in the sense that they keep the economy in equilibrium. Below the line, inflationary pressures develop because interest rates are too low, given the fiscal stimulus, above the line effective demand remains below capacity and causes unemployment to rise. The graph clearly shows that Europe has moved to a low-interest rate policy mix since the mid 1990s and this explains in part why employment has improved over recent years. It also shows that European monetary policy has been rather accommodating since 2007. Despite tough talk about fiscal policy, the ECB has not raised interest rates to the equilibrium level. Monetary policy has been stimulating effective demand in the Euro area.

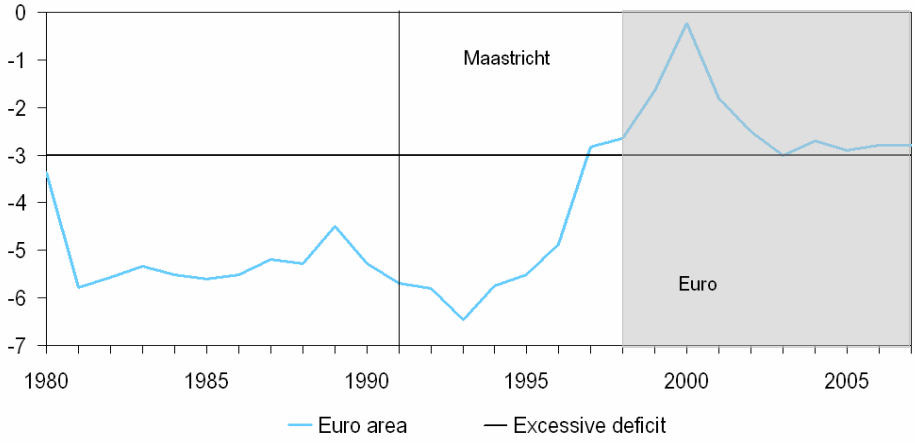
66

The Stability and Growth Pact (SGP), which stipulates balanced budgets, has not been implemented. Since the beginning of European monetary union, aggregate European deficits have remained closer to the 3% deficit/GDP-ratio allowed under the Excessive Deficit Procedure (EDP) than the 0% of the SGP. The equilibrium interest rate remains therefore higher than what European fiscal rules could achieve. Implementing the SGP would lower the level of equilibrium real long term interest rates by a full percentage point. According to our estimates for the investment function (table 9), balancing the aggregate European budget would, therefore, have added half a percentage point to the Euro area's long term growth rate.

67

Europe's institutional framework is not conducive to a Clinton/Greenspan policy mix that keeps interest rates persistently low. The reasons are *collective action problems*. The institutional arrangements of European monetary union have maintained national autonomy over budgetary decisions although the Treaty of Maastricht stipulated the need for avoiding excessive deficits. The Stability and Growth Pact subsequently specified the procedures necessary to prevent such excessive deficits from occurring. However, this rule-based policy arrangement works only very imperfectly. If the Stability and Growth Pact had been properly implemented, actual deficit of member states would have gyrated around the zero line. This is not the case. Instead figure 20 shows that before the Maastricht Treaty was agreed, the aggregate Euroland budget deficit remained stable around 6% of GDP. In the crisis year of 1991-2 it went even higher. However, with the growing credibility of EMU in the mid 1990s, budget consolidation brought the deficits down. In the boom year 2000 the aggregate fiscal position for the Eurozone all but disappeared. Subsequently, the growth slowdown pushed deficits up again, although the excessive deficit procedure seems has limited the aggregate deficit to 3%. Thus, it is the excessive deficit procedure of the Maastricht Treaty and not the Stability and Growth Pact that impose the binding constrained on member state budget policy.

AGGREGATE BUDGET DEFICIT IN EUROLAND **Figure 20**



68

Why do member states not comply with the policy framework they have themselves established? One answer is to assume that «governments cannot be trusted and that they do not attach importance to doing what they have told their EMU partners» (Pisani-Ferry et alt. 2008). This is a strange way of thinking about politics. Are we not living in a democracy? Why are voters not replacing untrustworthy governments by better ones? The fault is not with corrupt policy makers; it is systemic and it will need an institutional solution.

69

The *theory of collective action* provides a better explanation for this behaviour. Given the autonomy of national budget decisions, member state governments have an incentive to borrow at low interest rates provided by the rule-conforming behaviour of all others rather than to consolidate their own deficits. This is particularly true when budget consolidation is politically costly, say during a growth slowdown. This deviation from the optimal policy mix with low interest rates is a so-called Nash-equilibrium, i.e. individual violations from the rule produce better outcomes for deviating member states provided everyone else will play by the rules. But the incentive to better one's own situation at the expense of other member states also applies to all others players. Hence, the collective action incentives produce an aggregate fiscal trend that is not «in balance», but in permanent deficit.

70

As a consequence, the equilibrium position of interest rates will also be permanently higher. Only the threat of sanctions under the Excessive Deficit Procedure seems to prevent net borrowings from rising above 3 percent of GDP. Hence, the fiscal institutions in Euroland do not yield an optimal policy mix with structurally low interest rates and high investment. No doubt, the situation has improved since the 1990s, but more could be done to improve growth in Europe. Put differently, if the European Union had more appropriate institutional arrangements for fiscal policy, the long term perspectives for economic growth would structurally improve.

Income policy

71

Income policy is the third pillar of macroeconomic management that seeks to combine price stability with rapid growth, capital accumulation and employment creation. The key variable with respect to the interaction with monetary policy is the average level of unit labour costs. Unit labour costs describe the relation of nominal wages to productivity. If nominal wages increase faster than labour productivity, unit labour costs rise and this exerts inflationary pressure. Furthermore, if unit labour costs rise at the same rate as inflation, the wage share remains constant. See Box 5 «Unit labour costs, inflation and the wage share». However, this implies that if inflation is higher than the inflation target of the Central Bank, and wage bargainers aim for a constant wage share, inflation will be driven by a vicious circle of higher wages and higher prices. The Central Bank has then to raise interest rates and suppress inflationary pressures by restraining employment growth. A successful policy mix must keep average unit labour costs consistent with the inflation target of the central bank. This is a rule that has also been emphasised by the Integrated Guidelines for Growth and Jobs decided by the European Council in 2005 (European Commission 2005, especially Guideline no. 4) In theory, if every firm, every region and every member state would increase wages exactly at the rate of the sum of labour productivity and the ECB's inflation target, price stability would be maintained (we abstract from exogenous shocks like oil prices, etc.) and the wage share would also be stable. Furthermore, the competitive position between member states, regions, etc., would also remain unchanged, even if this implies significant nominal wage differentials between sectors and regions.

72

However, reality is different. Wage bargaining takes place within member states according to very diverse institutional rules. Usually these national rules do not explicitly take into account the European inflation target. In Germany, *Tarifautonmie* prevents governments from interfering in wage negotiation and wage restraint has kept unit labour costs far below the ECB target; in France, governments influence wage deals in the public sector and guide the private sector. In Italy the Social Agreements of 1992/93 (See Box 6: «The rules of wage bargaining in Italy») has contributed to wage restraint in the run up to European monetary union, but it has now become dysfunctional because the wage bargaining rules only focus on the competitiveness of the Italian business sector, and ignore the inflationary pressures developing in the public sector. Italian wage bargaining does not take sufficiently into account European developments.

73

Figure 21 shows the HP-filtered trends of unit labour cost increases in the Euro area member states. The average unit labour cost inflation for the Euro area remains clearly below the 2% inflation target of the European Central Bank. This explains the deterioration of the labour share in figure 11. But in four member states labour cost inflation is clearly higher than the inflation target, especially in Greece, Spain and Italy. Ireland accumulated low-wage advantages in 1990s, but unit labour costs are now rising rapidly. In Portugal the trend used to be above the target but has now come down. In Spain, however, it is still

UNIT LABOUR COSTS, INFLATION AND THE WAGE SHARE

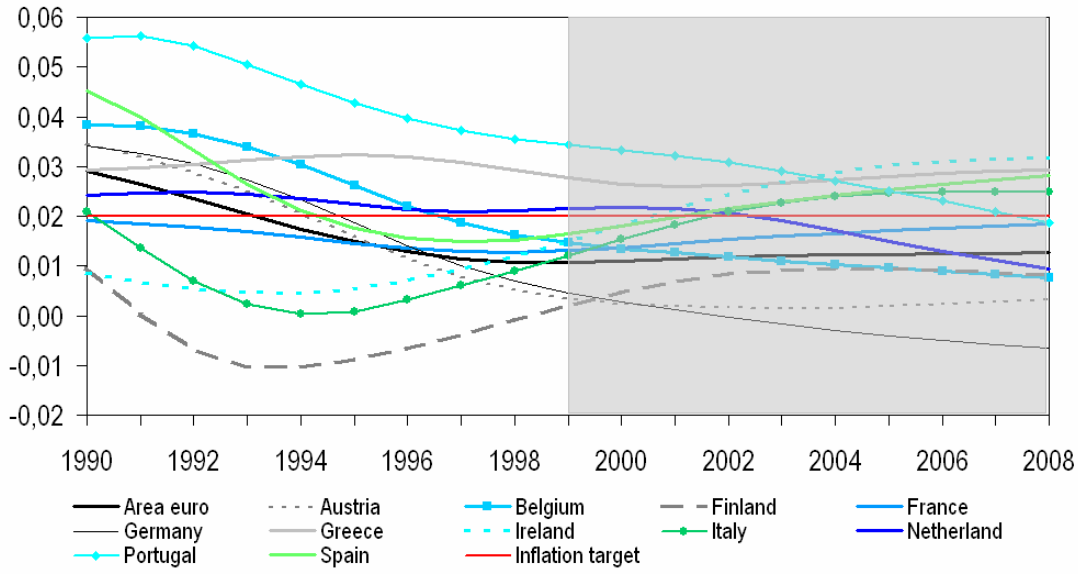
Nominal unit labour costs are defined as the ratio of total nominal wage compensation per unit of output: $ULC = \frac{WL}{Y}$, where *W* is the wage cost per hour (or per employee) and *L* the amount of hours worked, and *Y* is output. Given that labour productivity is Y/L, *ULC* depend on nominal wages and productivity. In dynamic terms, this means: $u = w - \lambda$, the growth rate of unit labour costs (u) is equal to the difference between nominal wage increases (w) and productivity growth (λ).

Real unit labour costs are equal to the wage share in GDP: $RULC = \frac{ULC}{P} = \frac{WL}{PY}$, so that the rate of change in the labour share is defined by: $\Delta RULC = w - p - \lambda$. In other words, the wage share falls, when real wages grow less then labour productivity: $(w - p) < \lambda$.

Unit labour costs are related to the price level by the profit margin (c), which is the inverse of the wage share: $p = (w - \lambda) + c \Rightarrow \Delta RULC = -c$.

If real wages (*w* - *p*) increase at the same rate as productivity, the wage share and profit margins remain constant and the price level is determined by the evolution of unit labour costs. Thus, a rule of increasing real wages at the rate of productivity is the same as saying prices increase at the same rate as unit labour costs. If prices grow faster than *ULC* ($p > w - \lambda$), profit margins increase and the wage share falls. A rule of increasing nominal wages at the rate of productivity plus the inflation target $(w = \lambda + p^*)$, amounts to postulating a stable profit share under conditions of price stability $(p = p^*)$.

UNIT LABOUR COST INFLATION TRENDS **Figure 21**



rising. For Italy see Box 6. The wage developments in these countries contribute to inflationary pressures in the Eurozone. However, they are mitigated by wage settlements in Germany, Austria, Belgium and Finland. It is the heavy weight of Germany that keeps European unit labour cost from rising. But German wage restraint has been a cause of slow economic growth since 1999. What Europe needs today is higher wages in Germany and lower nominal wage increases in Spain and Italy.

74

These very different wage dynamics have affected the relative cost competitiveness of member states. Figure 22 shows the evolution of absolute unit labour cost levels as the deviation from the Euro area average since 1999 (9). For example, in absolute terms Germany's unit labour costs were at the average Euroland level in 1999 when EMU started. Today, they are the lowest in the Euro area, more than 10% below the average. By contrast, Portugal and Spain have seen their unit labour cost levels rise to 15% above the average of the Eurozone. These developments increase social and economic tensions in Euroland and could become politically destabilizing. Portugal now seems to be turning the corner, but Spain and Germany are not. Germany pursues a beggar-your-neighbourhood policy and Spain is riding an unsustainable bubble.

(9) The relative position is based on the assumption that in 1999, the first year of the single currency, nominal ULC reflect real ULC. This amounts to saying that the deviations of national nominal ULC from the euro-average in 1999 are the mirror image of the national deviations of profit shares relative to the Euro area.

THE RULES OF WAGE BARGAINING IN ITALY

The Agreement of July 1993 replaced the old system of backward-looking wage bargaining by a forward looking arrangement. It consisted of the substitution of the automatic indexing of wages (scala mobile) by the planned inflation rate with the aim of maintaining the real value of income and containing the effects of inflationary tendencies. Until 1992 the automatic indexing of wages had contributed to high inflation changing the rules in 1993 was necessary to facilitate Italy's joining the euro.
Putting it in analytical terms, until 1992, the Italian wage dynamics was driven by a rule describing a backward-looking expectations mechanism:

$$w_t = w_{t-1} + p_{t-1}$$

with lower case indicating percentage changes. For $p_{t-1}>p_{t-2}$ this rule induced wage inflation acceleration, when the economy was exposed to external, exogenous price shocks. In case of $p_{t-}<p_{t-1}$, the rule had the effect to slow the pace of wage deceleration, causing inflation persistence.

Under the new Agreement the wage rule turned to a forward-looking expectations mechanism, changing as follows:

$$w_t = w_{t-1} + E[p_{t+1}]$$

with

$$E[p_{t+1}] = p^* < p_{t-1}$$

where p* is the planned inflation rate, fixed by definition below the rate of inflation of the preceding period. This rule allowed for a sudden decrease in the current rate of inflation, eliminating the persistence problem.
Convergence to the European price standard was assured by following the rule:

$$p^* - p_{Eu,t} = \varepsilon_t \quad and \quad \varepsilon_t < \varepsilon_{t-1}.$$

In the years of convergence towards monetary union, the Agreement provided social partners with a complete system of incentives and thus with a credible institution in the field of income policies. None of the actors involved had an incentive to deviate from the planned inflation rate:

- The Government had the objective of converging to the Maastricht criteria and not to cheat agents by trading off a higher rate of inflation against higher growth.

- The Business sector sought to eliminate inflation differentials in order to remain internationally competitive, given the environment of exchange rate stability.

- Trade Unions wanted to stop the employment decline, which had occurred after the 1991 recession in the industrial sector.

The new rules of wage bargaining have definitely broken the wage-price spiral of earlier years but not yet allowed for more negotiations at the corporate level (1).

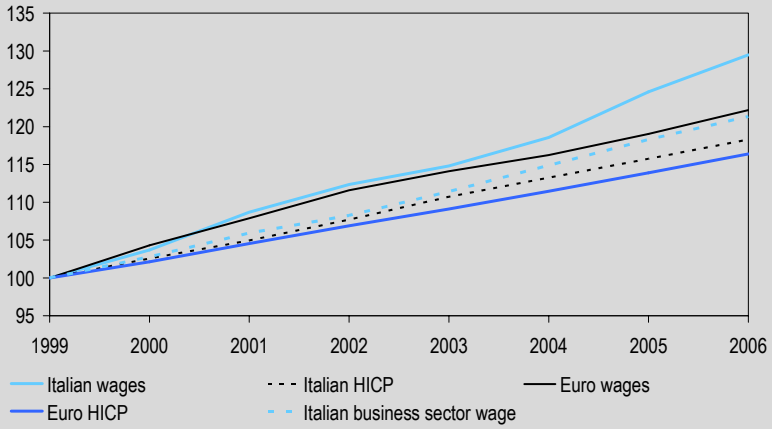
The Italian system is not fully adapted to wage setting in the European monetary union. Although wage inflation has been moderated by the 1993 Agreement, nominal wages on average still grow faster than in the Euro area, especially since 2004 (figure A). A deeper analysis reveals this to be exclusively due to the peculiar dynamics in the public sector. Since 2000 nominal wage growth in the Italian business sector has remained below the European average.

This notwithstanding, unit labour cost inflation in Italy is still higher than in Europe. Nominal wages grow faster than productivity. This is caused by the fact that wages in the public sector grow faster than in the business sector, and because labour productivity is stagnating overall. As a consequence, Italian wage dynamics contribute to inflationary pressures in the Euro area.

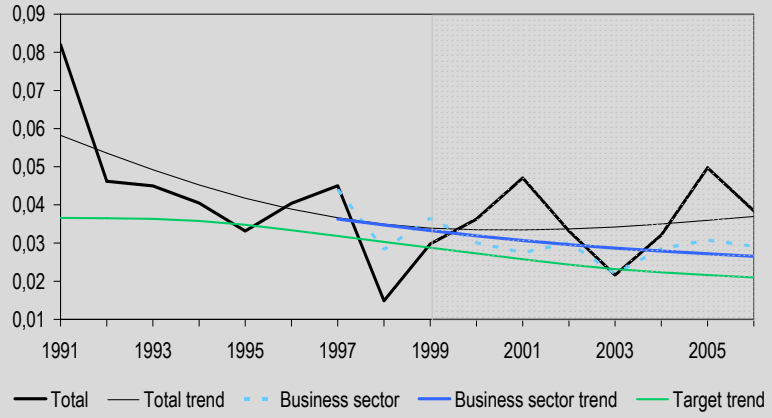
Figure B shows the developments of aggregate wages in Italy as a whole and in the business sector. The thick lower line indicates the trend line of our wage bargaining rule «average productivity plus ECB-inflation

(1) Casadio P. Lamelas M. and Rodano G. "Cambiamento istituzionale, salari e flessibilità: l'esperienza della concertazione in Italia". Rivista internazionale di Scienze Sociali, April-June, 2005, pg. 185 e ss.

HICP AND WAGE DEVELOPMENTS **Figure A**



ITALIAN WAGE DYNAMICS **Figure B**



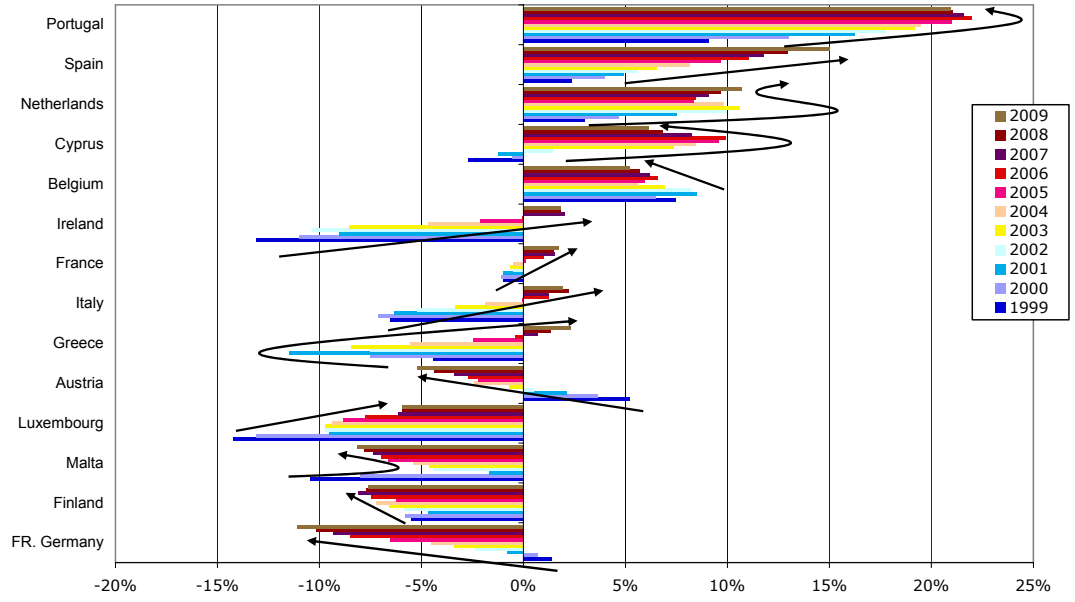
target». Aggregate wage increases have remained above this line in all years since 1999 with the exception of 2003. The trendline for aggregate wages (ITWAGETR) is moving up, indicating a divergence from stability-oriented wage settlements. However, the trendline for the business sector (ITWAGEBSTR) runs parallel to the inflation target. Assuming that productivity in the business sector is higher than in the public sector, this would indicate that the private sector behaves in line with the requirements of the single European market. However, it poses two questions: how can the cost pressure in the public sector be contained? Would it be acceptable to let public sector wages deteriorate relative to the business sector, because of productivity differentials?

Finally, note that the augmentation in (nominal) unit labour costs has not prevented a sharp reduction of labour share in Italian business sector given the fact that Italian inflation is higher than the Euro area's average and producer prices augmented more than consumer prices. Thus, it is not possible to argue that differentials in domestic price indexes have deteriorated competitiveness. Nevertheless, the fall in the labour share is a result of the fact that businesses are able to increase their prices more than their labour costs. Thus standards of living for wage earning household are deteriorating relatively. But rather than seeking higher nominal wages, which would increase inflation, measures to raise the purchasing power of wage earners and to substantially improve Italian productivity.

The Italian National Statistic Institute (ISTAT) is currently revising data on prices and quantities in National Accounts, which may change some of these assessments.

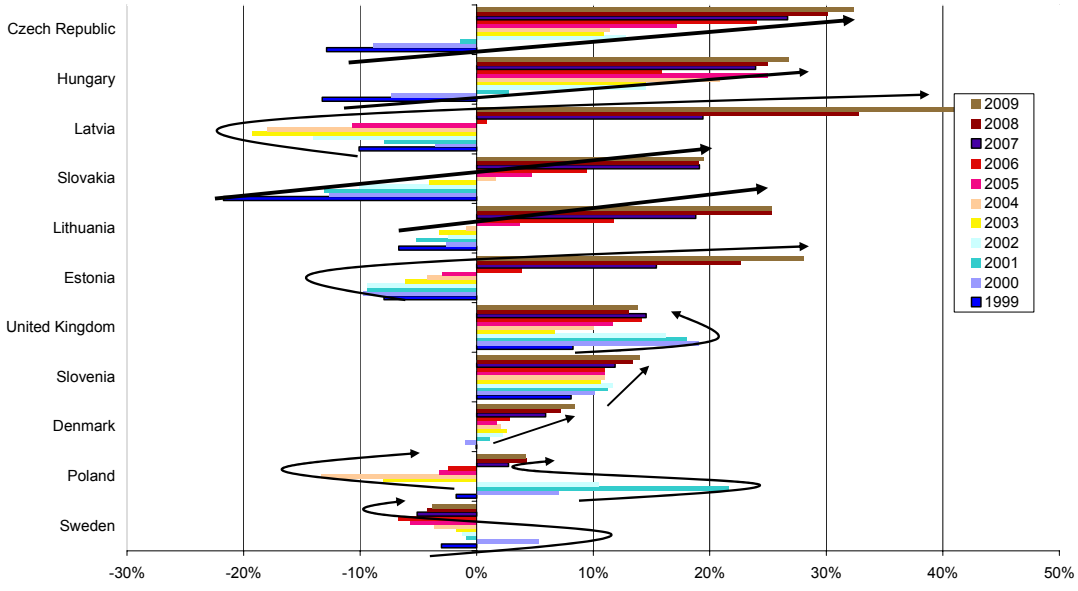
UNIT LABOUR COST DEVIATIONS FROM EURO ZONE LEVELS: 1999-2008

Figure 22



ULC IN NEW MEMBER STATES AND OUT COUNTRIES RELATIVE TO EURO ZONE

Figure 23



75

These developments must be of serious concern to policy makers and citizens. If they remained unchecked, European monetary union could become unsustainable. Dullien and Fritsche (2007) have formally tested for the possibility of wage and price convergence in Euroland. They found that it does occur in most countries (except in Spain and Germany), but at a very slow pace. However, the slower the adjustment, the larger are the potential social costs in terms of unemployment and loss of growth. This is the reason for making income policies an urgent issue.

76

A more rational income policy would have to tackle two problems at the same time:
(1) It should bring aggregate wage settlements closer to the inflation target so that the purchasing power of consumers is increased (an issue particularly acute in Germany) without accelerating inflation, to which the European Central Bank would respond by rising interest rates.
(2) A rational income policy must also stop and correct the persistent divergence of national unit labour cost levels. This requires a significantly higher degree of coordination in European wage bargaining.

77

Concern about wages is less urgent, but not irrelevant, in non-EMU member states. According to neoclassical theory, changes in nominal exchange rates could compensate deteriorating competitiveness. However, in reality exchange rates do not only reflect relative prices and cost differentials but also expectations regarding future returns in exchange markets. As this can cause substantial distortions within the single market, all member states of the European Union are supposed to aim for exchange rate stability. Figure 23 shows the absolute levels of unit labour costs relative to the Euro area average in the non-EMU member states. Due to changes in nominal exchange rates relative to the euro, relative unit labour cost levels vary sometimes substantially from one year to the next. It is quite obvious that nominal exchange rates do not adjust to compensate for loss of competitiveness.

78

Given that all new member states are under the obligation to meet the convergence criteria and join EMU (with the exception of Denmark and the UK), it is important that the stabilization is made in such a way that unit labour costs do not impede economic growth in the new member states, where European per capita income, is usually below the average.

79

To summarize our discussion, the European economy has substantial unrealized growth potential that could be freed by more active and more coordinated macroeconomic policies. Especially, the creation of a single currency has profoundly transformed Europe's policy framework, but policy makers have not yet drawn the logical conclusions and created the appropriate institutions for fiscal and income policies at the European level. I will now discuss some practical reforms which could improve Europe's economic growth performance.

POLICY RECOMMENDATIONS

80 In order to accelerate its dynamism, Europe needs political-institutional reforms, a concrete structural reform agenda and a more coherent macroeconomic policy mix.

Political institutional reforms

81

The great contribution of the Lisbon Strategy consisted in Europeanizing policy domains that were previously considered exclusively national prerogatives. Reforming the European social model sticks out as a pre-eminent example for this. Before Lisbon, social policies were considered an exclusively national prerogative. The open method of coordination created practical jobs and opportunities for national administrations and parliaments who had to re-evaluate national policies from a European point of view. The contribution of this coordination process to European integration must not be underestimated. Progress always advances by concrete steps. However, our analysis has also shown that concrete policies may run into systemic obstacles, most prominently the collective action problem. At this point, institutional reforms are required. If the successor strategy to the Lisbon agenda does not address the institutional problems and obstacles, it is programmed to fail.

82

Implementing institutional reforms is difficult. A broad policy consensus across parties and countries is required because institutional reforms usually require unanimity by all member states for ratification. In order to foster such consensus, policy makers and citizens must understand why institutional changes are needed and they must actively promote them. Acceptance will follow public debates and this is where elected representatives, national governments, national parliaments, the European Parliament, and civil society play an important role. They must initiate and drive public reflection and deliberation.

83

However, in the present intellectual climate, speaking about institutional reforms is becoming a taboo. The European Council in December 2007 established a «Reflection Group horizon 2020-2030», inviting the members «to identify the key issues and developments which the Union is likely to face and to analyze how these might be addressed» (Council of the European Union, 2007). But the Council also explicitly told the group *not* to think about institutional changes (or European borders) (10). So what will be left to think about?

84

The reluctance to address fundamental issues in the European Union is a reaction to the failure in France and in the Netherlands to ratify the Treaty on the European Constitution.

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(10)* «The Group shall conduct its reflections within the framework set out in the Lisbon Treaty. It shall therefore not discuss institutional matters. Nor, in view of its long term nature, should its analysis constitute a review of current policies or address the Union's next financial framework.*» Council of the European Union, 2007.

Many commentators, especially on the Eurosceptic right and left, have used the referendum outcome as evidence that citizens are tired of «more Europe». The Eurosceptic supporters of «the Europe of People» (*l'Europe des Peuples*) have concluded that European democracy (*l'Europe des Citoyens*) is impossible. They recommend the Europe of practical steps, the delivery of results (*l'Europe des preuves*), not understanding that the present institutional arrangements are the biggest obstacle for achieving «results». Their approach defeats the purpose; it risks the slow disintegration of the European Union.

85

An alternative reading of Europe's credibility crisis suggests lack of democracy as the real issue for citizen's non-acceptance of Europe. People feel they are no longer the «sovereign» in the sense that they should have the last word on the great political orientations when they cast their ballots (11). They notice that *national democracy* does not longer work, because policies are decided in intergovernmental negotiations in «Brussels» over which they have no or only little control. But they are also aware that *European democracy* does not yet work, because there is no clearly established authority or agent or government charged with the administration of European public goods that they could elect when voting for parties in the European Parliament. Such crisis, where the old is dead and the new not yet born, is dangerous. Historically it has often caused authoritarian or totalitarian backlashes. In Europe it feeds populism and Euroscepticism.

86

Democracy means choice. Political parties must propose alternatives among which citizens choose after due reflection and debate. This process allows citizens to consider themselves as the «sovereign», as the ultimate authors of laws applicable to them. Only if they can be justified by this procedure have collective decisions binding force. Policy making in Europe must therefore go beyond the negotiations of intergovernmental compromises. It must propose clearly defined choices to citizens. Citizens must be able to choose and appoint an agent, their government, to implement the common policies they wish to see delivered at the EU level. National governments cannot be this agent. National governments represent the *special* interests of their restricted constituency. Their decisions have external effects on other members of the European Union. To «internalize» such externalities and to create responsibilities for collective actions has been the classical argument, at least since David Hume and Adam Smith, for setting up governments. Governments must regulate collective decisions, so that the costs are minimized and borne by all those who are concerned and affected.

87

But in the EU there is no government. Although the European Commission is a «guardian of common interests», in reality it is often marginalised by the special interests of nation state governments. This institutional fault is increasingly recognized. The liberal Belgian Prime

(11) According to Eurobarometer no. 69, December 2007, only 30% of all European citizens believe that their voice counts in the European Union, while 61% believe that their country's voice counts.

Minister Guy Verhofstadt has analysed Europe's credibility crisis after the French and Dutch referendums and concluded:
«In short, the Union's citizens want Europe to be stronger, more purposeful and, well, different. They do not want a Europe that merely churns out paper or opens up its borders. They are not willing to pay for that alone. What they do want is a decisive Europe that develops a foreign policy and a credible security and defence policy and above all comes up with a comprehensive economic and social strategy that is capable of rising to the challenges posed by globalisation. Put another way, Europe's citizens want a European project that is once again characterised by positive action and which inspires them. If Europe is to succeed in doing this, it must make a clearer choice, a choice that it has repeatedly postponed making in the past». (Verhofstadt, 2006)

88

Verhofstadt's solution is setting up a European Government responsible for five limited and strategic tasks, namely European social and economic governance, developing European technology, the European area of justice and security, European diplomacy, the European army. Designing a successor Lisbon II strategy could give substance to the first chapter.

89

On the left, the German Social Democratic Party (SPD) has drawn similar conclusions from Europe's crisis of confidence. Formulating its new fundamental program at the Party Congress in Hamburg in 2007, the SPD committed itself to the «Europe of citizens»:
«Our model is a political union granting all European citizens democratic rights of participation. The democratic Europe needs a government answerable to parliament on the foundation of a European constitution» (12).

90

The largest and oldest European party on the left also saw the need to link institutional and economic reforms in order to preserve Europe's social model:
«Europe has created the largest single market in the world and even introduced its common currency. This happened in the interest of Europe's citizens. Neither in Germany nor in Europe, however, shall we accept a market economy leading us into a market society. After the Europeanization of the fiscal and monetary policy we are pleading for growth and employment oriented coordination of economic, fiscal and monetary policy. This requires generally binding economic rules».

91

These ideas must be discussed more widely in Europe. Policy makers should link then to

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(12) «Unser Leitbild ist eine politische Union, die allen europäischen Bürgern demokratische Mitwirkungsrechte gibt. Das demokratische Europa braucht eine parlamentarisch verantwortlichen Regierung auf der Basis einer europäischen Verfassung.» SPD, Soziale Demokratie im 21. Jahrhundert. Grundsatzprogramm der Sozialdemokratischen Partei Deutschlands; Beschlossen auf dem Hamburger Parteitag am 28. Oktober 2007 http://www.parteitag.spd.de/servlet/PB/menu/1727812/index.html

the concrete debates regarding certain structural reforms and explain how and where citizens' interests are better safeguarded by a European government. In the following sections of this paper, I will provide some concrete proposals and strategies.

92

However, such European policy debate must also articulate the cleavage between centre-left and right-wing policies across Europe. While European democrats should find a constitutional consensus for setting up a European government, concrete policies may sometimes conflict sharply between political camps. The campaign against the Bolkenstein service directive was an example how such cleavage can mobilize citizens for European actions. Proposing neoliberal reforms is legitimate, but Social democratic policies may serve the common good better. Citizens must be able to choose.

93

The election of the European Parliament in 2009 is the perfect opportunity to have this debate on the European scale. Centre-right parties will support Barroso's neoliberal agenda; European democrats and socialists should reformulate a new strategy that connects the original Lisbon agenda with the broad objectives of a dynamic economy, with rising productivity and full employment. They must link structural reforms to macroeconomic management. The new European Commission emerging from the European parliament election in 2009 should reflect voters' preferences on these matters and not shady backroom compromises between heads of governments.

94

Designing a Lisbon II Strategy is an opportunity to formulate a new project for «the Europe of Citizens» that combines practical policies for citizens with the democratization of the institutions. Here are some ideas, how this can be accomplished.

Structural reform agenda

95

The Lisbon agenda had clearly defined objectives and methods. It intended to prepare Europe for «globalization with a human face». Has it worked? We have raised some doubts in the earlier sections of this paper. However, more knowledge is required. A detailed review of what has and what has not worked should be undertaken by the European Commission. The Commission should have the exclusive authority for this review, for if it had to be submitted to the formal or informal approval of member states, most criticism would be suppressed. The Commission's Report should subsequently be discussed and approved by the European Parliament, so that different political sensibilities can be articulated.

96

The basic philosophy that inspired the first Lisbon agenda is still valid:

- Reforming Europe' social model and preserving social justice requires economic growth.
- Economic growth requires persistent job creation and rising the growth rate of

labour productivity

- Sustained and accelerated economic growth therefore requires supply-side reforms to interact with more coherent macroeconomic policies for which an appropriate framework needs to be established.

97

On the supply-side, the idea of transforming Europe into a Knowledge Society is still the right positioning for a global economy where China and India will compete with America for the position of the leading player. Europe needs to build on innovative competitive factors, renew the European social model, preserve its social and cultural cohesion, and contribute to the regulation of globalisation in the interest of mankind (Rodrigues, 2002). Building a modern Knowledge Society must focus on two pillars: (1) improving levels of education in order to enable citizens to participate in the opportunities of the developments in the global economy, and (2) accelerating the rate of innovation and diffusion of R&D.

98

Regarding education, far too much narrow nationalistic protectionism impedes a truly dynamic adaptation of European minds to a globalized world. As we have seen, by far the most important reform for creating a Knowledge Society would be to improve foreign language skills in Europe, and in particular English. The majority of Europeans believe that the best age to start learning languages other than the mother tongue is from 6 years onwards, in other words at primary school. The age group of 6-12 years receives the widest support both when the first (55%) and the second (64%) foreign languages are considered. In accordance with the idea of an early start, 39% of European citizens would accept the introduction of language teaching to children between 0 and 5 years when it comes to the first foreign language (Eurobarometer, 246, February 2006). So why are national governments not putting reforms of their educational system into place that would enable their citizens to seize the opportunities of globalization? A Lisbon II strategy should focus on improving linguistic skills in the EU. Every member state should impose teaching English in primary school, except the UK and Ireland, where other European languages should be offered.

99

Similarly, European R&D is strangled by nationalistic reflexes of protectionism, often under the cover of «industrial policy». For example, why has it taken so long to get an agreement on the Galileo project? For many observers developing a European navigation system is the civil equivalent to US defence contracts propping up technological innovation. With a Budget of 3,4 to 4,5 bn euros Galileo will foster R&D and give Europe a strategic independence in this important technological field. But 8 years after Galileo's launch, rivalry among member states («*knallharte Industriepolitik*» according to the German minister Wolfgang Tiefensee) has delayed the project's implementation and pushed up costs at the expense of European tax payers. Is protecting national industries truly the way forward to accomplish and realise large scale research projects that would catapult Europe to the front line of scientific research? Can Europe afford to make the disbursement of research funds subject to national veto-players? Would it not be better to centralize this at the European level and

ensure a coherent, efficient and speedy research agenda? A review of structural reforms in the Lisbon agenda must evaluate if and where the open method of coordination has worked in the field of R&D and the diffusion of technological innovations and where more delegation to the European level is needed. It also must name and shame those who undermine and boycott progress. But if collective action problems prevent the efficient and parsimonious use of public resources, policy decision-making should be delegated to the European level under a unified authority. The attachment to preserving the past prevents Europe from having a future.

100

In general, structural reforms should contribute to the rise of Total Factor Productivity. The original argument behind the Lisbon Agenda was that better educational levels and more R&D would increase Europe's productive capacity. We have seen that little of this intention has materialised. We have argued that collective action problems are responsible for the insufficient coordination and cooperation in Europe. But part of this failure may also be ideological. We have emphasised structural reforms without distinguishing clearly between supply side reforms at the level of firms that increase the allocative efficiency of the European economy, and policies which improve the efficient functioning of the economy as a whole (so-called X-efficiencies). The concept of X-efficiency takes into account factors other than the allocation of factors of production, namely motivation by workers and managers, or non-market inputs, including broad externalities, which we may call «macro-supply-side factors».

101

Europe has too long focused on micro economic reforms, which augment allocative efficiency. A large part of the Single Market program was based on this line of arguments. But as Leibenstein (1966) has shown long time ago, allocative improvements are usually small. An important part of labour productivity increases and TFP cannot be explained by more efficient allocation of capital and labour. Many supply-side reforms of the last decade were aiming at improving the motivation of capital owners to invest in Europe; little attention was given to the motivation of workers. And yet, there is a large literature proving that workers' motivation is a crucial element in reducing costs. Incentives for workers to participate in the overall efficiency of their firm might have a huge impact in improving productivity in Europe. This would require re-evaluating the role of works councils, co-determination and board representation of workers in European firms. European company law should incorporate the success stories of national experiences, although this will raise stiff residence from capital owners.

102

Macro-supply-side reforms are the other dimension for improving overall labour productivity. Again, excessive focus on micro reforms has missed the importance of potentially negative externalities. For example, the liberalization and break-up of cartels and monopolies could lead to the more efficient allocation of capital and labour across the European Union, but it may also lower overall productivity. In principle more competition serves the interests of

European consumers, particularly in the lowest income categories, because cartels and monopolies keep prices excessively high and are thereby rationing consumer demand. Completing the single market and ensuring «fair and free competition» in Europe, has therefore made a valuable contribution to growth as well as to social justice. In fact, the European Commission study (2007) has shown that Europe's comparative advantage, in terms of labour productivity increases, is precisely concentrated in those network industries and public utilities which have been opened up for competition by the single market program. Nevertheless, privatisation can also create externalities and slow down productivity growth. For example, when individual decisions have collective spill-over effects, they are causing costs which were not taken into account by the decision-making process. As a consequence, overall productivity will be affected negatively. We find such effects when delocalizing and shifting production to locations with lower costs (especially of wages and taxes) will increase the efficiency and profitability of a given firm, but moving the products back to the original home market could increase volumes of traffic on roads, thereby slowing down the speed of transport for everyone. Thus, productivity gains would be reduced overall. Investing into European infrastructure would then be necessary to increase productivity again.

103

Taking such externalities into account requires a European authority that can think for the whole of the Union and is capable of acting in the common interest; it must also command resources on its own. This raises the issue of the European budget in the context of structural reforms. The Sapir Report (Sapir et alt., 2004) has proposed to «reorganise radically» the EU-budget for economic action within the EU. The authors of the report suggest setting up a Growth fund to support R&D, innovation, education and infrastructure; a Convergence fund to help low income countries to catch up with the rest of the Union; a Restructuring fund for facilitating resource re-allocation und supporting disadvantaged groups, particularly displaced workers and low-income groups in the agricultural sector.

104

These ideas could be used for designing a new Lisbon II Agenda. Public expenditure by the European Union should focus on three objectives:
(1) supporting the mobilisation of private and national resources at the edge of technological and industrial progress.
(2) contributing to the cohesion between different regions and supporting catch-up growth in low income region by increasing TFP and Capital intensity at the regional level.
(3) easing the pressure for those who carry the burden and suffer from the consequences of social change.

105

The Growth fund should focus on policies that increase labour productivity across the Union and in specific regions. Pushing the technological frontier by supporting R&D and technological innovation will require concentrating financial efforts, while the adaptation and modernisation of existing capacities implies spreading new technologies across Europe.

However, the focus here must be on facilitating the entry and competition of new firms, rather than supporting national or European champions, which maintain rigid monopolies (Aghion and Howitt, 2005). In order to remove resource allocation from the harmful influences of national veto players, this budget should be subject to the co-decision procedure between the European Parliament and the Council and executed by the European Commission.

106

In this context, the role of public investment needs to be revalued. Public investment can make a contribution to increasing X-efficiency: decades of underfunding in infrastructure have been a constraint on productivity in many member states. The experience in recent years has shown that fiscal consolidation often started by cutting public investment, rather than public consumption. Yet, a lot of evidence points toward the fact that economic growth benefits from public investments, while public consumption reduces it (Agénor, 2008; Aghion and Howitt, 2005; IMF, 2004). The European Union could increase its overall growth potential by undertaking public investment that benefits citizens by mobilising local resources and spilling over into different member states. Shifting the balance from public consumption to investment should be scrutinized by the annual Broad Economic Policy Guidelines and the evaluation of national budget policies under the Stability and Growth Pact procedures.

107

The Convergence fund and the Restructuring fund should become instruments for European redistribution policies. It is clear that structural reforms and liberalising policies create winners and losers: some regions and sectors will attract more productive firms and workers, others will loose their jobs. Europe needs to think about mechanisms whereby the winners will compensate the losers and how the required increases in flexibility can be matched with a reasonable level of security in living standards for individuals.

108

The Scandinavian model of «flexicurity» provides us with some answers, but they are designed for redistributive policies within fairly homogenous societies. In Europe, the relatively high degree of heterogeneity in wealth and income across countries is likely to prevent large schemes of redistribution. The most acceptable vehicle to design redistribution policies remains regional policy. Substantial amounts (about a third of the EU's budget) are spent on structural and cohesion funds. They are calibrated to sub-national requirements and this allows fine-tuning policies to specific requirements. The effects of EU fiscal transfers can be significant in receiving countries, although they may lower growth for net contributors (13).

(13) A study by the European Commission (in't Veld, 2007) shows that the EU cohesion policy program 2007-2013 will on average raise GDP by more than 5 percent by 2013 in the new member states relative to the baseline scenario. Average growth in donor countries will be down by nearly 2 percent because of higher taxation.

109

Regional policy is presently one of the most successful policy areas of the European Union. It contributes to the high growth performance of new member states that we have seen in Table 1. However, we know little about the mechanisms through which this success is achieved (Bouvet, 2007; Ulltveit-Moe, 2007). It might be recommendable to focus on regional differences in TFP and capital intensity in order to increase productivity in underperforming regions and, thereby, in the EU overall. Furthermore, attention must be paid to the macroeconomic polices in member states that receive structural and cohesion funds. Excessive budget deficits and rising unit labour costs will cause real exchange rate distortions, which reduce the relative competitiveness of low income countries and deter needed investment. The experience of Ireland over the last two decades, and more recently of Greece, compared to the non-performance of Portugal show that the right policy mix is perhaps the most important variable in catch-up growth. The effectiveness of transfer payments is greatly enhanced by such policies.

110

However, European budget policies pose another problem: How are these funds to be financed? Today more than 90 percent of the EU budget come from national contributions paid by national treasuries, rather than from taxes levied on EU-wide fiscal bases (Sapir et alt. 2004: 197). This creates a classic collective action problem: the provision of collective goods is underfunded, because when member state governments seek to obtain individual advantages by minimising their financial contribution, they jeopardise the collective interest of European citizens (including those living in their own jurisdiction). The correct systemic response to this problem is to finance European expenditure by European taxes. A reform of the EU budget system is therefore needed. A European Commission is now reviewing the possible options and this is the opportunity to increase the own funds of the European budget (See also Wolfang Schüssel, 2007). A European tax base must be related to transactions in the Single market, which affects potentially all European citizens. This could be VAT or CO_2 or corporate tax.

111

However, a European corporate tax has a number of advantages in financing the EU-budget. This could be done without increasing the overall tax burden of citizens, simply by restructuring the inflows and outflows of national budgets. The tax base is wide enough to cover the entire needs of the relatively small EU-budget (less than 1 percent of GDP), even if expenditure levels were to be increased. But in addition, it would also support social justice in Europe by eliminating disloyal tax competition between different jurisdictions. For example the average corporate tax rate is 10% in Cyprus, 12,5% in Ireland, 15% in Lithuania and Latvia, 16% in Hungary, 19% in Poland and Slovakia; it is 38,3% in Germany, 37,25% in Italy, 35% in Spain and 33,3% in Belgium and France (14). Imposing a unified corporate tax on all companies operating in the single market would level these differences, establish an equal level playing field and remove distortions. Such European tax cannot be

(14) See www.kpmg.com/Services/Tax/IntCorp/CTR/CTR.htm.

imposed without appropriate democratic representation. It therefore needs to be approved by the Council and the European Parliament, after an initial proposal from the future European government.

Macroeconomic management

112

The purpose of macroeconomic management as a complement of structural reforms is to create an economic environment where persistently low interest rates contribute to the acceleration of capital accumulation. Other than the ECB and the Stability and Growth Pact, the Euro area has set up three instruments for the coordination of macroeconomic policy: The Eurogroup, the Broad Economic Policy Guidelines and the Macroeconomic Policy Dialogue. The new Lisbon II agenda should use these instruments to improve macro economic management.

113

(1) The *Eurogroup* is a meeting place for finance ministers, the European Central Bank and the European Commission, to discuss policy issues on an ongoing basis. The new Treaty of Lisbon will give the *Eurogroup* formal recognition. It increases the flow of information between these actors and often forces finance ministers to review the impact of national policies on the Euro area as a whole. But unfortunately, it does not allow for binding policy commitments as member states retain their ultimate rights of sovereignty. This fact makes it impossible to develop the *Eurogroup* into more than a simple clearing house for autonomous decision making. The *Eurogroup* cannot become the structure for an economic government. When binding decisions for the whole Euro area are needed, it is necessary to base them on a body representing all citizens concerned by these decisions, rather than on national governments.

114

(2) *The Broad Economy Policy Guidelines* (BEPG) are annual documents that are supposed to produce a coherent framework for macroeconomic policy. Again, the advantage is that it forces national ministerial bureaucracies to respond to EU requirements (often formulated by the Commission) but in reality it has little binding force, if national governments consider it inconvenient.

115

(3) Finally, the *Macroeconomic Policy Dialogue* (MPD) involves not only member state governments and the European Central Bank, but also social partners. The purpose is to facilitate the flow of information between policy makers and social partners, so that wage settlements will not create inflationary pressures (second round effects after shocks) to which the ECB would respond by rising interest rates. But again, the problem with this MPD is the lack of binding commitments on either side of the dialogue. If macroeconomic management is to become more efficient, the institutional arrangements in the Euro area must become more coherent, and decisions must oblige and bind all policy makers. This can only be accomplished if institutions at the European level can command full democratic

legitimacy. Here are some ideas how the existing policy framework could be improved.

116

We have insisted on the need to define a fiscal policy stance for the Euro area as a whole that interacts with monetary policy in determining the level of equilibrium interest rates. The Stability and Growth Pact cannot accomplish this, because it is too inflexible in response to shocks, which may be symmetric and affecting the whole of the Euro area, or asymmetric, touching only certain regions or sectors. In other words, fiscal policy must become more coherent in aggregate and at the same time more flexible vertically with respect to the symmetric shocks and the aggregate fiscal stance. But it must also become more flexible horizontally to accommodate shocks that effect member states differently.

117

These requirements could be met by two reforms of the present institutions. First the aggregate fiscal stance should be defined at the European level after taking into consideration the general business climate in the Eurozone. This could be done by turning the Broad Economy Policy Guidelines into a formal piece of European legislation that applies with strict and binding force to the member states of the Euro area. But it could also cover the convergence requirements of non-Eurozone member states. These guidelines would set the authorized *aggregate* spending and income targets for all EU public authorities (from municipalities to regions, nations and the EU budget), as they seem relevant from a business cycle point of view, but also with respect to intergenerational burden sharing. As such the BEPG would effectively define the aggregate budget deficit of the European Union for any given year. Referring to Italy's macroeconomic policy fiscal framework, Giuliano Amato has called such a macroeconomic law a European *DPEF*. In Italy, the government defines first the multi-annual macroeconomic framework law, the *Programmazione Economico e Finanzario (DPEF),* and then the *legge finanziaria*, which implements the actual budget allocations (Amato, 2002). It would oblige member states to respect their European commitments when formulating their national budgets laws. If the agreed aggregate fiscal position is a deficit, each member states would receive a part or a quarter of the aggregate deficit as an entitlement for net borrowing by public authorities. These deficits permits should be allocated according to national GDP shares of member states in the total European Union GDP. But it is possible to make additional adjustments according to specific criteria which would need to be agreed among member states.

118

How would this system insure horizontal flexibility? The agreed entitlements must be transferable. If one government wishes to borrow more than it is entitled, it must obtain additional permits from an other member state that does not wish to make full use of its own quota. In this way, compliance with the overall aggregate fiscal policy stance is assured. The transfer could be subject to negotiations within the *Eurogroup*.

119

An alternative and more elegant idea is to make the deficit permits tradable in an open

market following the model of tradable CO_2 pollution permits (Casella, 2001). In this case, member states could also decentralize borrowing permits to lower level jurisdictions and public authorities according to their own assignments rules. Hence, all regional and municipal or para-statal institutions would obtain borrowing permits from member states governments and would be able to trade these permits in an open market.

120

This system combines the advantages of horizontal flexibility with strict enforcement of the overall fiscal stands. A public authority would only be able to borrow in the financial market if it can supply borrowing entitlements to the *lender* i.e. to banks. Financial markets would therefore automatically ensure that the aggregate deficit limit is respected, as no authority would be able to access the market without permits. At the same time, if economic shocks require that the aggregate fiscal position is shifted, this could be done by amending the BEPG-legislation that authorized the aggregate deficit of the Euro area and the respective deficit permits.

121

Who should decide on the appropriate level of borrowing permits? Referring to the model of Central Bank independence, some economists have proposed that an independent group of experts should decide the appropriate fiscal deficits in the Euro area (Wyplosz, 2002, 2007). Such ideas are incompatible with modern democratic norms. Democracy is based on the principle of «no taxation without representation» and «one man, one vote». Ideally, a European institution, a government, should propose the aggregate fiscal policy stance and submit it to the approval of citizens' representatives in the European Parliament. As an intermediary step, one could envisage that the *Eurogroup* deliberates together with the Commission and the ECB on the appropriate policy stance, and then submits it to the ECOFIN which translates it, in co-determination with the European Parliament, into binding EU legislation. A number of technical details would have to be solved to make such scheme of tradable borrowing permits workable. EU policy makers should request the Commission to prepare a Green Paper on which future action could be based.

122

The second complex of macroeconomic management is income policy in the Euro area. As with fiscal policy, there is the vertical issue of ensuring that aggregate wage settlements remain consistent with the inflation target of the ECB and the horizontal issue of ensuring that national unit labor costs converge to the average level of the Euro area. It is possible that the Macroeconomic Policy Dialogue has contributed to the relatively benign environment of aggregate unit labor cost developments in recent years. But is seems more likely that this was the unintended result of extreme wage restraint in Germany. Given the persistent divergence in some member states, it is quite obvious that the Macroeconomic Policy Dialogue does not work. What would be an alternative? Evidently centralized wage bargaining at Euroland level is out of question. Too diversified are the levels of labor productivity and the institutions of wage bargaining across member states. Instead, wage bargaining must follow clear guidelines that would allow negotiators to render decentralized

settlements coherent and compatible with the overall requirements.

123

The basic norm for European wage bargaining must be that nominal wages increase in line with productivity and the inflation target of the ECB. Temporary deviations between countries and overtime, caused by economic shocks, may occasionally be allowed, but the general trend in wage bargaining must respect this rule. Deviations from the rule should be publicly discussed and justified. In order to increase public acceptance and compliance, which is crucial during wages negotiations, this debate should take place in a transparent, mutual and openly accessible forum. One should therefore transfer the Macroeconomic Policy Dialogue from the Council to the European Parliament. Parliament would invite social partners to regular public hearings on wage negotiations and subsequently make recommendations to social partners and member states governments. These hearings could be coordinated with the auditions of the ECB-President in the European Parliament. Prior to these hearings, national macro-dialogues could still take place as they do today.

This reform would render wage bargaining more transparent with respect to the macroeconomic policy requirements of the Euro area as a whole. It would, therefore, foster a new culture of stability-oriented income policies in Europe. One may also consider whether a more binding mechanism is ultimately required when unit labor costs deviate persistently from trend. This could be modeled on the procedures to impose sanctions under the Stability and Growth Pact. Again, more detailed work and collaboration with social partners is required.

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