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# Document de travail

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**« Macroeconomic and social policies in the EU 15 :  
the last two decades »**

**N° 2009-20  
July 2009**

***Collection OFCE/ANR n°9***

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# Macroeconomic and social policies in the EU 15: the last two decades

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## Abstract

This draft of our contribution to “The politics and economics of change in European social models” book project, is focused on the relation between macroeconomic policies and social models in the EU 15 during the last two decades. It first describes the shift towards the Maastricht “culture of discipline”, i.e. the effect of the implementation of rules governing macroeconomic policies management for euro area countries, assesses its consequence in terms of economic performance and evaluates how those rules are playing out so far in the current crisis. We then attempt at detailing the second shift towards “structural reforms” of social models to show how it has resulted in a weakening of “automatic stabilizers” that, therefore, can’t fully play their role in the current crisis. Finally, we offer some analytical insights to make sense of those two shifts.

Keywords: European Union, global crisis, macroeconomic policies, social policies, euro area.

JEL Codes: E42, E58, E61, F31, N14

## Introduction: “American crisis”, European predicament

Since the start of the turmoil on global financial markets in the Spring of 2007 and its brutal acceleration in the Fall of 2008<sup>1</sup>, EU officials have been keen on viewing the continuing degradation of the financial, economic and social context as a consequence of an “American financial crisis”. As late as December 2008, their claim was that, since European banks and consumers stayed clear of excessive risk-taking, over-consumption and unsustainable indebtedness, the EU economy, and the euro area in particular, would be less affected by economic stagnation and its painful social consequence.

It has become extremely hard to maintain this view in the face of declining growth and massive layoffs in continental Europe. Actually, figures for 2008 are contrasting the European view: according to Eurostat, the OECD and the IMF, growth in the EU and the euro area was *lower* than in the US, in a range of 19% to 37%.

GDP growth for 2008, in %

	Eurostat	IMF	OECD
Euro area	0.8	0.9	0.7
EU 27	0.9	—	—
US	1.1	1.1	1.1
Total OECD	—	—	0.9
Emerging and developing countries	—	6.1	—
World	—	3.2	—

Data source: IMF, Eurostat, OECD.

The detail per quarter of the dynamic of entry into recession of the US and the EU helps understand why the respective situation of two regions has reversed in the course of 2008: Europe was growing more than the US in the beginning of the year, but something happened that turned this situation upside down, so that the US, which grew faster in Q2, Q3 and as fast in Q4, eventually displayed higher growth for the whole year.

Whatever the interpretation of economic events, the social consequence of the European recession is clear: unemployment is, again, rising at a fast pace in Europe to reach almost already its level of the year 2000 in the euro area.

The business cycle dating in the euro area and US, respectively established by the NBER and CEPR, confirm that, once again contrary to the European view held for most of 2008, both regions entered into recession almost simultaneously. With regards to the US, the NBER notes: “The committee determined that a peak in economic activity occurred in the U.S. economy in December 2007. The peak marks the end of the expansion that began in November 2001 and the beginning of a recession. The expansion lasted 73 months; the previous expansion of the 1990s lasted 120 months<sup>2</sup>”. Regarding the euro area, the CEPR released the following assessment<sup>3</sup>: “Our best judgment specifying the month of the peak is

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<sup>1</sup> Two possible turning points being April 2<sup>nd</sup> 2007 (bankruptcy of News Century Financial) and September 14<sup>th</sup> 2008 (collapse without subsequent governmental bail-out of Lehman Brothers).

<sup>2</sup> NBER, December 2008, <http://www.nber.org/cycles/dec2008.html>

<sup>3</sup> CPER, March 2009, <http://www.cepr.org/press/Dating-Committee-Findings-31-March-2009.pdf>

January 2008. The peak marks the end of the expansion that began in the third quarter of 1993 and the beginning of a recession. The expansion lasted 57 quarters or more than 14 years.”<sup>4</sup>

What emerges is thus the following picture: contrary to the European perception and official public claim, the EU and the euro area have been hit almost simultaneously with the US by a brutal economic deceleration turning to recession from the beginning of 2008; the EU has since suffered more than the US from this recession in terms of loss of output.

This brings about a natural question at the center of this chapter: what about the European macroeconomic response to the crisis? The European position, stated forcefully at the G20 summit in London in early April and through numerous interventions by the ECB, the Eurogroup and national governments is twofold: the economic shock is not as severe in Europe as it is in the US so that the overall European fiscal and monetary response need not to be as massive as the American one; the EU can rely on its “automatic stabilizers” to buffer the recession anyhow, so that, within the overall European response, discretionary macroeconomic policy need not be as strong as in the US.

The first part of this claim seems not only weak but simply false according to the available evidence: the shock has stronger consequence in the EU and the euro area than in the US. Hence a consistency problem with the second part of the argument: since the discretionary response was weaker in 2008 in the EU than it was in the US, something did not quite work as expected with European automatic stabilizers that could actually not prevent a severe output contraction, so that in the future, with the crisis lasting, we can expect that they will not work well enough. The EU and the euro area should thus more actively stimulate their economies if they want to avoid a further decline in their GDP, yet, for now, a majority of member states is opposed to it. Overall, the European position, with all its dimensions taken into account, seems quite hard to understand on the ground of economic logic.

More importantly, and this is what we intend to demonstrate in this chapter, it is rooted in two crucial shifts that occurred during the last two decades: the emergence of the Maastricht “culture of discipline” in macroeconomic management, that led to the implementation of restrictive rules on monetary and fiscal policy; the contemporary European “commitment to structural reforms” of social models, that promoted the rolling back of social protection programs and labour market flexibility. Those two fundamental shifts are interlinked but not in an efficient way: macroeconomic policies can indeed be relatively passive if social protection systems take care of the unemployed, but the resulting soft growth path will gradually put the social protection system and public finance under growing pressure in times of downturn, as fiscal and social receipts will slowdown at the very moment where social expenditures are increasing ; on the other hand, under a soft growth regime and absent reactive macroeconomic policies to counter economic contractions, “structural reforms” of social models may seem to be the natural economic policy but their effectiveness are largely doubtful on both theoretical and empirical grounds.

This first draft of our contribution to “The politics and economics of change in European social models” book project, focused on the relation between macroeconomic policies and social models in the EU 15 during the last two decades, first describes the shift towards the Maastricht “culture of discipline”, i.e. the effect of the implementation of rules governing macroeconomic policies management for euro area countries, assesses its consequence in

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<sup>4</sup> On the nature of this impressively long “expansion”, see *infra*.

terms of economic performance and evaluates how those rules are playing out so far in the current crisis. Our focus is naturally on the 10 countries covered by case studies chapters, all of them except Norway in the EU 15 and 7 in the euro area, and our time frame is more or less the last two decades. Since we believe that the most important macroeconomic event in the last two decades in the EU 15 was EMU, we attempt to compare countries inside and outside monetary union on the one hand, and, on the other hand, the euro area and the only comparable economic region, the US, in terms of macroeconomic performance and policies. We then attempt at detailing the second shift towards “structural reforms” of social models to show how it has resulted in a weakening of “automatic stabilizers” that, therefore, can’t fully play their role in the current crisis.

Finally, we try to make sense of those two shifts by developing two analytical arguments. First, as insufficient cooperation between European states is obvious in the current crisis, it has to be put in perspective. Non-cooperative policies have actually rationally developed in the euro area with, in their background, the economic consequence of country size. The second set of analytical arguments we make relies on “public social customs” and norms: social customs between European states play a role in constraining inefficient outcomes; the course of European macroeconomic policies in the last two decades can also be seen as a way to force “structural reforms” in member states so as to achieve a new inequality norm.

### **The Maastricht “culture of discipline”: the game of the rule**

The opposition between the EU and the US in terms of macroeconomic activism seems as clear-cut as it is logic: economic policies have to be active only where the social protection system is insufficient to maintain consumption levels of the less wealthy (the US) and passive where the system is thought to be generous (the EU). The US don’t have (and maybe don’t want) a developed welfare state, hence they must rely on monetary and fiscal reactive policies whenever they face a downturn, because if they don’t, the social cost of economic crisis becomes politically unbearable. The EU countries on the contrary, albeit with important variations, do have generous welfare states so that they don’t need to be as active in terms of macroeconomic policies: they can rely, in time of economic downturn, on built-in mechanisms that form an “encapsulated fiscal policy”, able to mechanically smooth economic contractions. At the heart of this apparent logic lies an important contradiction: massive unemployment can develop in the EU to excessive levels because it does not automatically provoke a major crisis of under-consumption.

What is an undeniable strength of the European model, the size of its welfare state, may indeed become a weakness as it can be used as a pretext not to follow an appropriate macroeconomic policy reaction to the rise of unemployment. Our general view is that Europeans, obsessed with the nominal convergence and stability at the core of Maastricht “culture of discipline”, did not act enough to fight unemployment in the early 1990s and foster economic growth as they embarked on a decade of painful artificial convergence concluded by the successful launching of the euro and a subsequent decade of non-cooperative policies, concluded by the current crisis.

Indeed, starting in the late 1980s, macroeconomic policy became uni-dimensional in Europe, only seeking to meet a single objective: price stability. But, even if macroeconomic policies could no longer be mobilized to promote employment, the social cost of unemployment was largely masked by the importance of social protection. The abnormally high level of interest

rates to which this macroeconomic orientation led in the early 1990s has worsened the recession while weakening recovery at the same time. Later on, expansionary shocks, where they appeared (late 1990s, early 2000s), have been softened to prevent the emergence of inflationary surges. Trends towards employment imbalance could therefore only increase, with phases of expansion never being sufficient to wipe out the employment consequences of previous recessions. But this tendency was able to make itself evident without provoking a major social and political crisis because the public sector acted as a kind of shock-absorber: it has carried most of the burden of adjustment and was consequently in structural deficit. Yet this deficit should not be interpreted as a sign of fiscal discretionary policy: it was hardly used to stimulate the economy when it needed the most, in the early 1990s and 2000s.

First, we try to evaluate and compare the macroeconomic performance of euro area countries, the three big countries within the euro area (that make up for two-thirds of euro area GDP), the three EU 15 countries outside the euro area and the US.

The nominal performance of euro area countries and of the three big countries within it is impressive: inflation has been divided by four since the early 1980s and stabilized at a low level while in the US inflation has been only halved and remained higher in the 2000s. Yet, the inflation performance of countries outside the euro area is even better than those in the euro area.

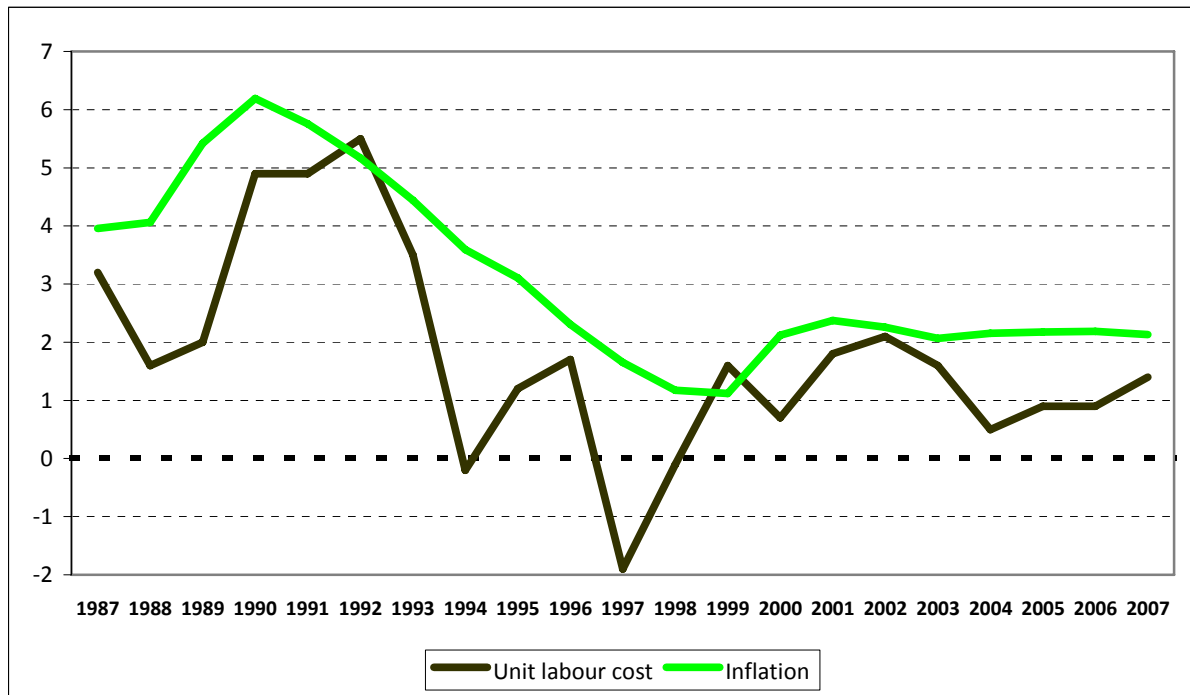
Consumer Price Index,  
annual growth in %

	Average 1979-1991	Average 1992-1998	Average 1999-2007
Three big euro area	6,34	2,65	1,75
Euro area	8,09	3,06	2,06
EU non-euro	7,32	2,34	1,58
US	5,88	2,60	2,71

Data source: OECD.

This inflation performance of euro area countries is even more impressive when one adds unit labour cost: both have been lowered and stabilized and, from this point of view, monetary union has been a success, although, as stated *supra*, countries outside the euro area display even better achievement.

Prices and costs lowering and stabilization in the euro area  
annual growth, in %



Data source: OECD.

But the euro area stands out when unit labour costs are considered: they have been reduced significantly more in the last decade than in non-euro area EU 15 countries and in the US. The euro area, it seems, has pushed further than these other countries the logic of nominal stability.

Unit labour cost, annual growth in %

	Average 1979-1991	Average 1992-1998	Average 1999-2007
Three big euro area	5,95	1,55	1,33
Euro area	5,90	1,83	1,59
EU non-euro	7,60	1,86	2,48
US	4,76	1,91	2,29

Data source: OECD.

But this “culture of discipline” does not pay off as far as real economic performance are concerned. While real GDP growth was higher or comparable in euro area countries in the 1980s, it was much lower in the phase of monetary convergence (1992-1998) and still lower in the 2000s, lower than the US and lower than the EU non-euro countries. Monetary union does not seem to be a success in terms of economic growth. This evolution is confirmed with regards to GDP per capita dynamic. The difference here is the evolution of the US population



that lowers GDP per capita growth in the US, especially in the 1990s and the 2000s. But the gap between the three big countries in the euro area, the euro area and the non-euro area countries, gap that was inverted in the 1980s, remains the most salient fact.

#### GDP and GDP per head, annual growth in %

	Average 1979-1991		Average 1992-1998		Average 1999-2007	
	GDP (volume)	GPD per head (GDP / Working age population)	GDP	GPD per head	GDP	GPD per head
Three big euro area	2,56	1,77	1,48	1,28	1,72	1,65
Euro area	2,5	1,68	1,76	1,44	2,18	1,82
EU non-euro	1,99	1,62	2,59	2,35	2,77	2,09
US	2,74	1,44	3,56	2,49	2,75	1,36

Data source: OECD.

The situation in terms of unemployment rate reflects growth dynamic: unemployment was the lowest in the three big euro area countries in the 1980s, and increased in the 1990s to decline a bit in the 2000s, but the unemployment level of the euro area and in the three big euro area countries is still almost 40% higher in the 2000s than in the US and in the EU 15 non-euro area countries.

#### Unemployment rate (in % of active population)

	Average 1979-1991	Average 1992-1998	Average 1999-2007
Three big euro area	6,61	9,46	8,64
Euro area	7,52	9,89	8,31
EU non-euro	8,15	8,25	5,14
US	7,00	5,85	4,95

Data source: OECD.

Labour productivity dynamic also shows that the phase of monetary convergence and monetary union saw a decline in labour productivity for euro area countries, very important in the 2000s, which can be explained by the employment surge.

Labour productivity,  
annual growth in %

	Average 1979-1991	Average 1992-1998	Average 1999-2007
Three big euro area	1,70	1,66	0,78
Euro area	1,80	1,60	0,78
EU non-euro	1,58	2,45	1,81
US	1,00	1,56	1,87

Data source: OECD.

The European Commission produced in March 2008 its own assessment of the monetary union record with a similar focus on comparison between euro area countries, non-euro area countries and the US. The findings are consistent with ours: the nominal performance of the euro area are not better than those of non-euro countries, but its real economic performance is significantly worse, as it is also worse than that of the US.

		Euro area		EU non-euro	
		1989-1998	1999-2008	1989-1998	1999-2008
<b><i>Nominal performance</i></b>					
Inflation	%	3,3	2,2	3,4	1,7
Fiscal balance	% of GDP	-4,3	-1,7	-3,6	-0,9
Gross public debt	% of GDP	68,6	68,6	48,7	43
Long term interest rate	%	8,1	4,4	8,6	4,9
Real long term interest rate	%	4,7	2,4	4,2	3,3

***Real performance***

Real GDP	% rate of change	2,2	2,1	2	2,7
Real GDP per capita	% rate of change	1,9	1,6	1,7	2,2
Real GDP per capita	index, US =100	73	72	74	76
Employment	% rate of change	0,6	1,3	0,1	0,9
Labour productivity	% rate of change	1,6	0,8	1,9	1,8
Unemployment	% of labour force	9,3	8,3	7,9	5,2

Data source: European Commission.

		Euro area		US	
		1989-1998	1999-2008	1989-1998	1999-2008

### *Nominal performance*

Inflation	%	3,3	2,2	3,3	2,8
Fiscal balance	% of GDP	-4,3	-1,7	-3,3	-2,5
Gross public debt	% of GDP	68,6	68,6	67,8	60,7
Long term interest rate	%	8,1	4,4	7,1	4,8
Real long term interest rate	%	4,7	2,4	4,3	2,4

### *Real performance*

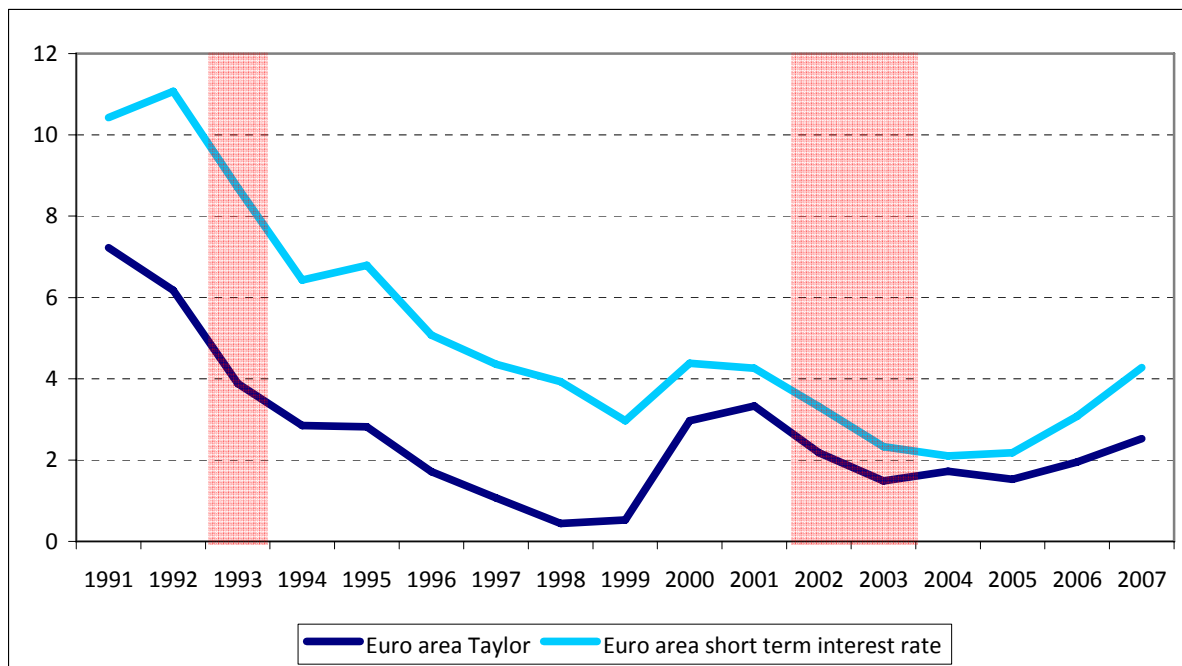
Real GDP	% rate of change	2,2	2,1	3	2,6
Real GDP per capita	% rate of change	1,9	1,6	1,8	1,6
Real GDP per capita	index, US =100	73	72	100	100
Employment	% rate of change	0,6	1,3	1,5	1
Labour productivity	% rate of change	1,6	0,8	1,5	1,6
Unemployment	% of labour force	9,3	8,3	5,8	5

Data source: European Commission.

The question we now want to explore is that of the orientation of macroeconomic policies in the euro area and outside to figure out what role monetary and fiscal policy have played in this disappointing performance of the euro area.

### *Monetary policy*

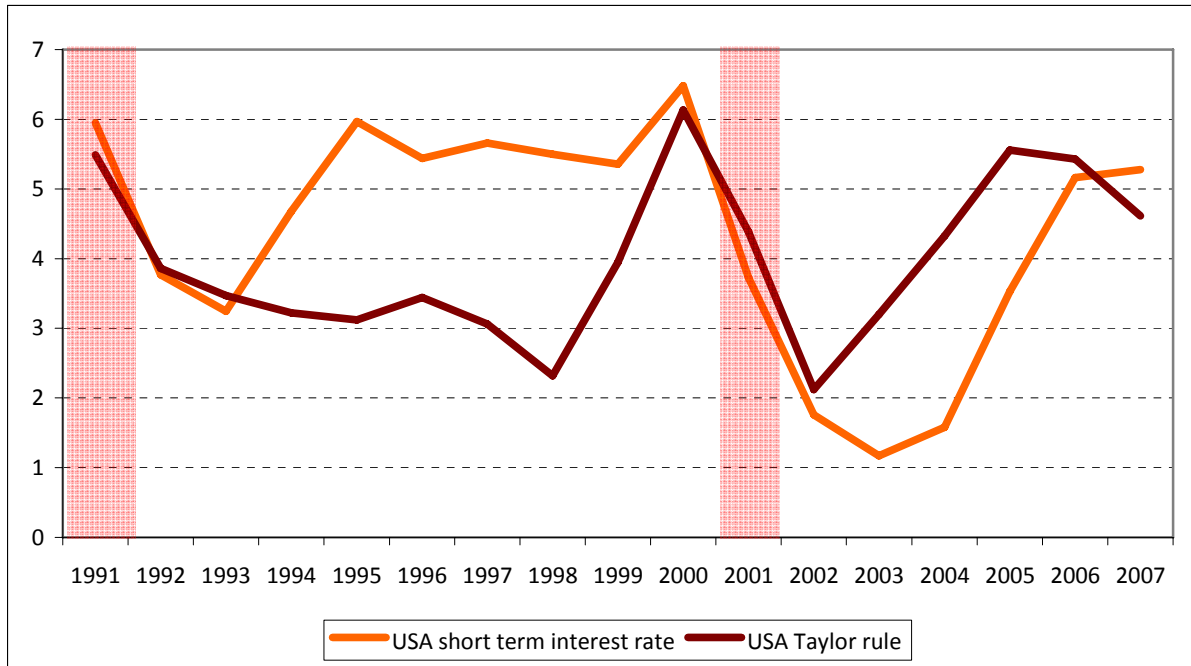
Monetary policy in the euro area in the last two decades can be assessed in two phases: monetary convergence and monetary union. It has to be evaluated given the economic shocks, i.e. we have to evaluate its reactivity to periods of economic contraction. We can do this using a simple Taylor rule first to see if monetary policy was restrictive and then to see if it was reactive. We can use the US as a benchmark.



Reading: shaded areas represent recession (negative growth) or quasi-recession (growth of less than 1%). Indeed the CEPR observes for the euro area that: “there was not a recession in 2001 or in 2003, but slow growth from the second to the fourth quarter in 2001 and a prolonged pause in the growth of economic activity in the first two quarters of 2003.”

Data source: OECD.

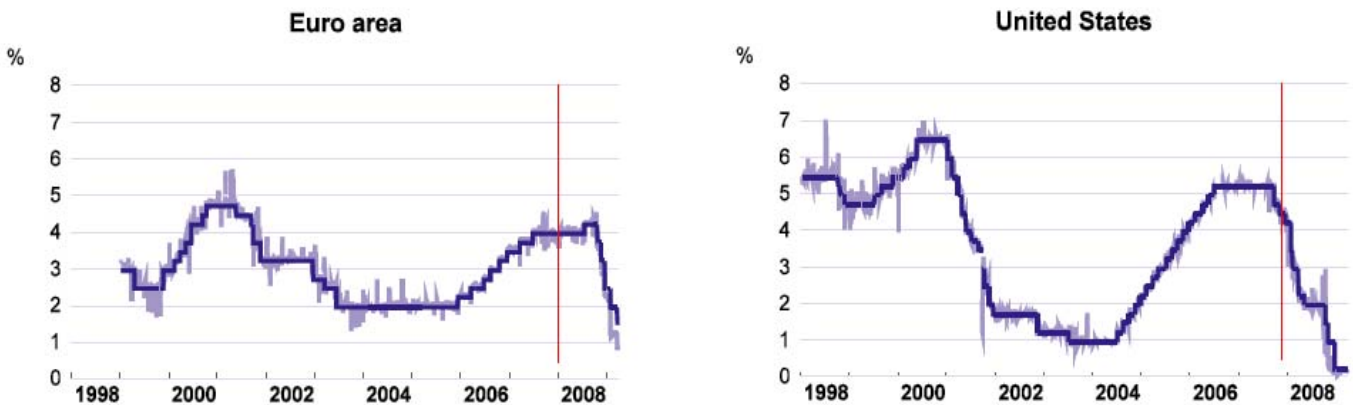
What seems obvious from the graph is that monetary policy in the euro area was always more restrictive than what the Taylor rule suggested. We can also see that the most important gap between the two occurred during the most severe recession in 1993, with actual rates the double of Taylor rule rates. Finally, monetary policy was not really reactive to the economic quasi-recession of 2002-2003: growth started to slow in 2001 but interest rate were first increased (see infra) and only gradually lowered afterwards. The US situation is in sharp contrast: monetary policy is very reactive to the economic context.



Datat source: OECD.

One of the interests of this comparison lies in the understanding of the decision of the ECB to increase interest rate in July 2008, while the euro area economy was already in recession. Clearly, the ECB chose price stability over economic growth and aggravated the European recession instead of counter-balancing it. The reaction by the Fed stands in striking contrast.

### Euro area and US monetary policy



Reading: The dark blue line represents the main policy rate of the central banks. The light blue line plots the effective overnight rate. The vertical line represents the time of entry into recession according to the CEPR for the Euro area and the NBER for the US.

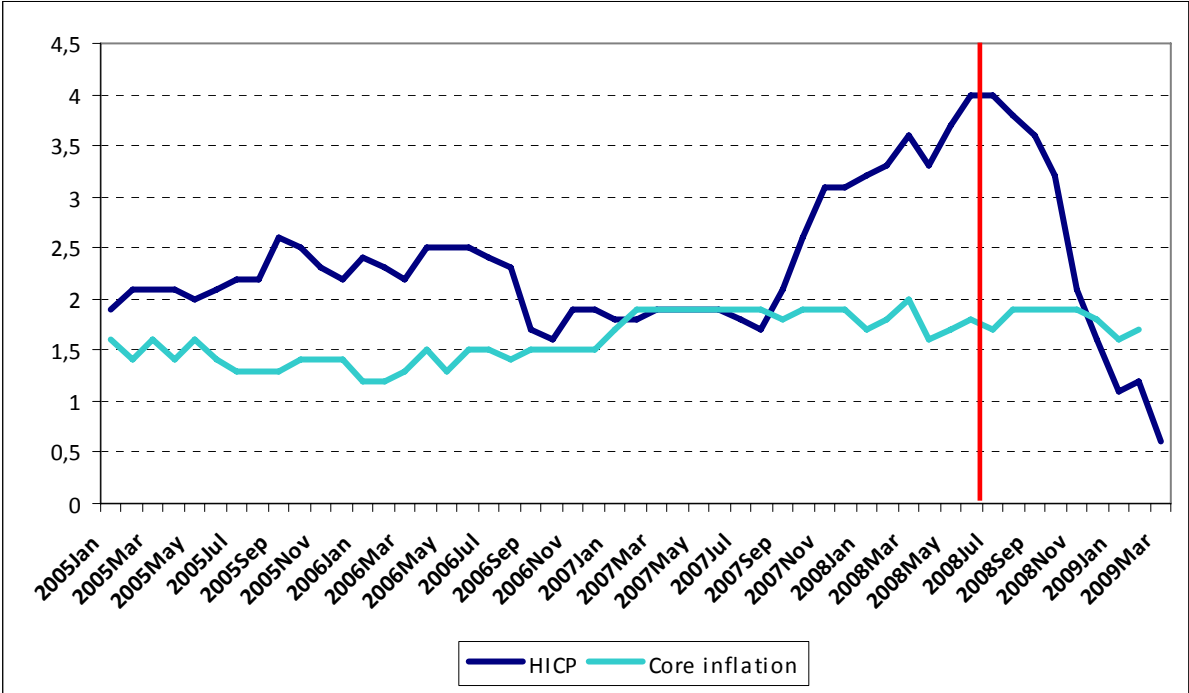
Graph source: OECD.

The ECB actually made in 2008 exactly the exact same mistake as in 2001 when it resisted a necessary cut in interest rates, waiting for the worst to be certain in terms of economic growth instead of trying to prevent it. In the meantime, the Fed acted boldly on both occasions to keep the U.S. economy growing. After the 2001 recession, it took a year for the U.S. to go from negative to vigorous growth. The question of course remains to determine if the Fed should have kept interest rates at a low level for such a prolonged period of time after 2001, but it is a different issue than reactivity to downturns.

One could argue that the ECB statutes command that it watches exclusively price stability, so that its statutes should be changed to avoid those systematic mistakes. But even this argument does not seem completely convincing: If article 105 of the European Community treaty indeed states that the “primary objective” of the ECB is to “maintain price stability”, it does not say that this shall be the only objective of the central bank. On the contrary, it adds that “without prejudice to the objective of price stability”, the ECB should help achieve the European Union’s goals, including a “sustainable and non-inflationary growth”. In other words, by focusing exclusively on inflation the ECB only fulfils part its mandate. Even more troubling is the fact that the ECB’s governing council, when it defined its policy strategy in October 1998, acknowledged that the commitment to maintain price stability “over the medium term ... reflects the need for monetary policy to have a forward-looking orientation” and that it also “acknowledges the existence of short-term volatility in prices which cannot be controlled by monetary policy”.

This is precisely what happened in 2008: overall inflation increased artificially because of energy prices while core inflation remained stable. When the ECB took its policy decision in July 2008, inflation was about to decline because of the global recession.

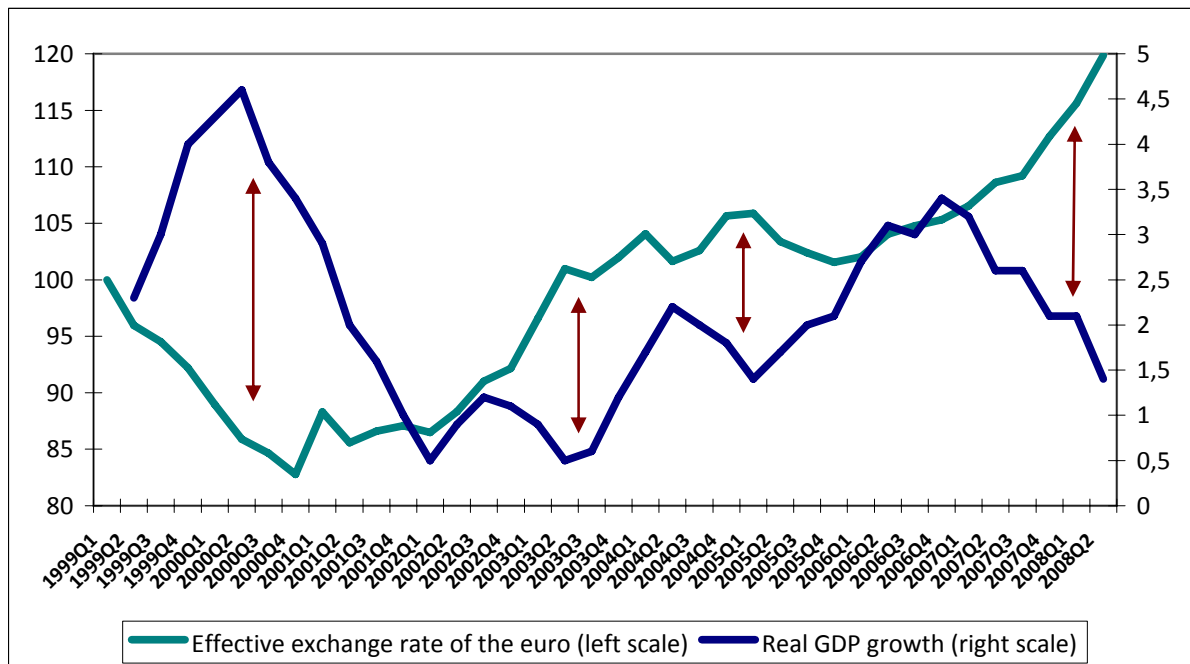
Headline and core inflation in the euro area



Reading: The vertical line represents the moment when the ECB decided to increase interest rates to 4,25%.  
 Data source: ECB.

## An exchange rate policy?

The exchange rate policy in the euro area has been completely submitted to the objective of price stability, so that the ECB controls de facto the exchange rate policy while de jure it is a shared competence with the Council<sup>5</sup>. As a result, the euro does not boost growth in the euro area, all the contrary. Since 1999, its exchange rate has gone down when economic activity was up and has increased when growth slowed down. The euro is mainly dependent on the ECB's anti inflationary stance. The price to be paid for price stability is high exchange rate volatility.



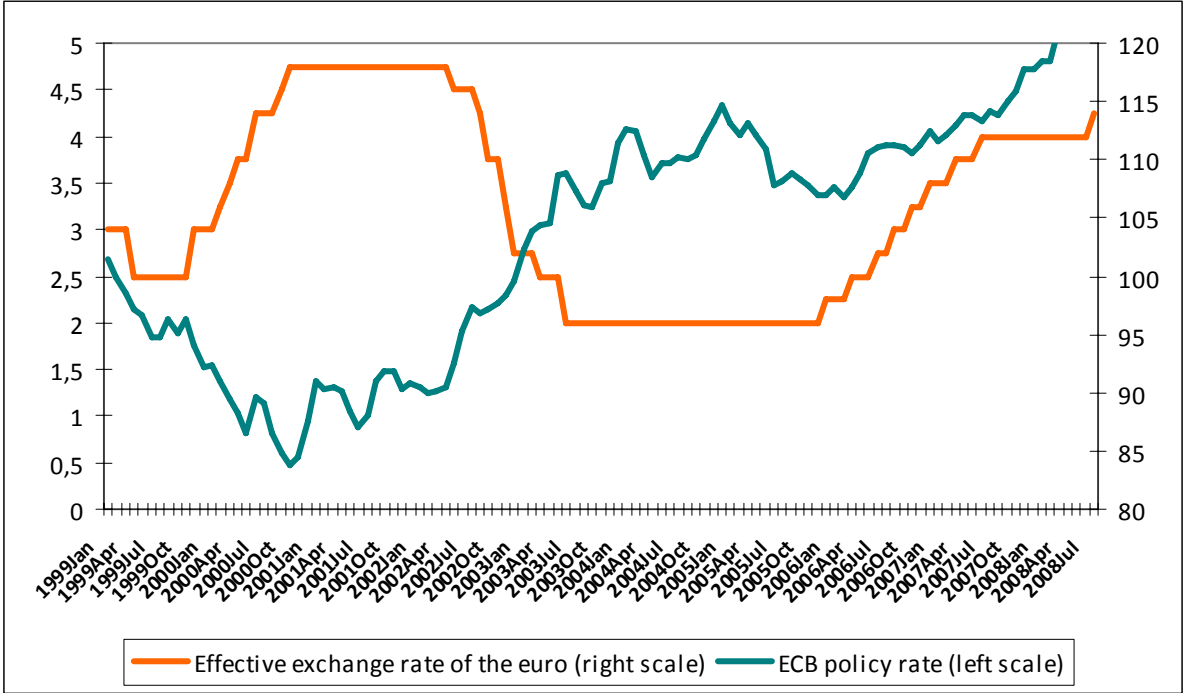
Data source: ECB.

The management of exchange rate policy is very different in the US, the UK and Sweden. The evolution of the US dollar has been a stabilizing factor since 1992, with the brief exception of the 2001 shock. Until 2000, the dollar's appreciation occurred in a period of high growth, while from 2002 onwards, the US currency's depreciation has sustained the upturn in the economy. The periods of currency appreciation persisted as long as growth rates in volume topped 3% in annual rate in the United Kingdom. Sweden's case is particularly enlightening. Even though the Swedish krona may well have remained stable against the euro, this does not change the fact that the country has pursued a counter-cyclical exchange rate policy, which is a wise move for a small economy like Sweden's since it is currently wide open to the outside world. Moreover, Sweden is outside the euro area, which means it has potentially more room for manoeuvre over its exchange and monetary policies than euro zone members. Thus, unlike its euro area counterparts, the Swedish Central bank has led an exchange rate policy resulting in a counter cyclical evolution of its exchange rate since 2001. The Swedish krona was at its lowest point in 2001 at a time when its GDP in volume was increasing by just over 1% a year. Then the currency's value went up, essentially against the dollar, which astutely supported the economy's recovery. Therefore, the Swedish krona's relative stability against the euro,

<sup>5</sup> See Creel, Laurent and Le Cacheux (2007).

especially since the Swedes decided not to adopt the euro, does not show that Sweden has stopped using its exchange rate to promote, or simply to defend, economic growth.

In the euro area on the contrary when the euro was already appreciating in 2006, the ECB pushed it upwards until July 2008. This means that monetary conditions, i.e. the combination of interest rates and exchange rates, has been historically restrictive in the euro area in 2007 and 2008, right before the euro area entered into recession.



Data source: ECB.

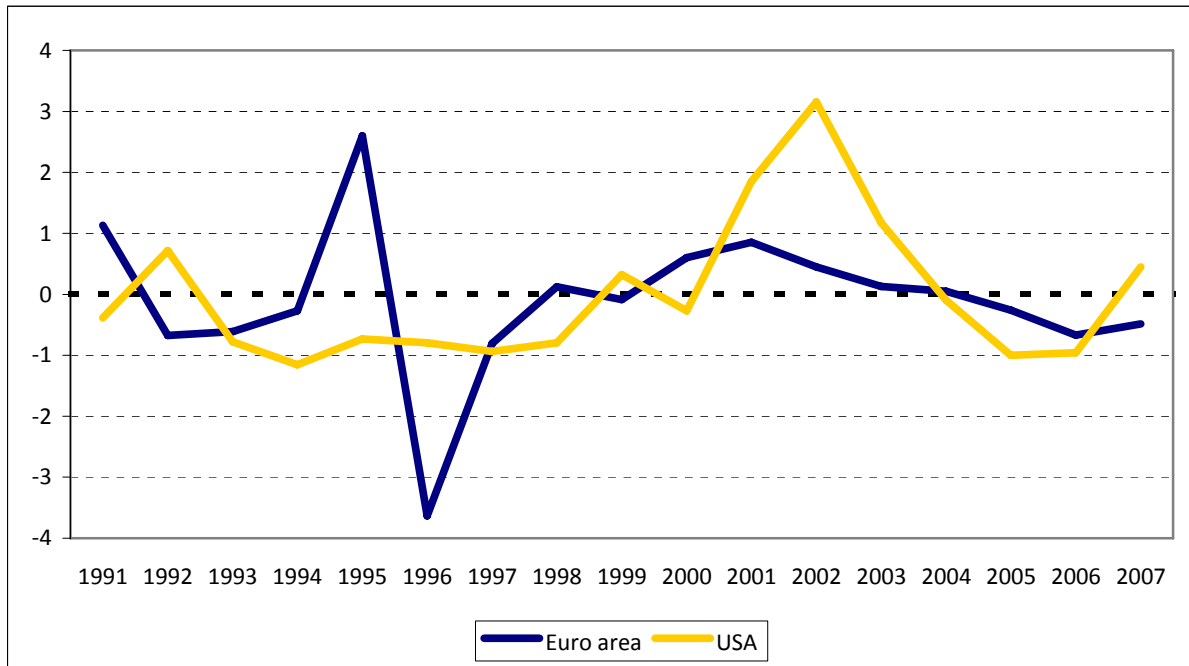
*Discretionary fiscal policy*

We only consider here discretionary fiscal policy, as we will detail the state of European automatic stabilizers in the following section. We use the traditional fiscal impulse indicator (measured as the inverse of the variations of the structural primary balance-potential GDP ratio) to assess discretionary fiscal policy in the euro area, the EU 15 non-euro area countries and the US.

The comparison between the euro area and the US is, once again, striking: the euro area does almost not respond to the two major shocks it faced in 1993 and 2002-2003, but seems to respond to another logic: that of monetary convergence (witness the negative shocks of 1996 and 1997 to satisfy Maastricht criteria). The US on the contrary responded to the shock of 1991 and even more importantly to the shock of 2001.



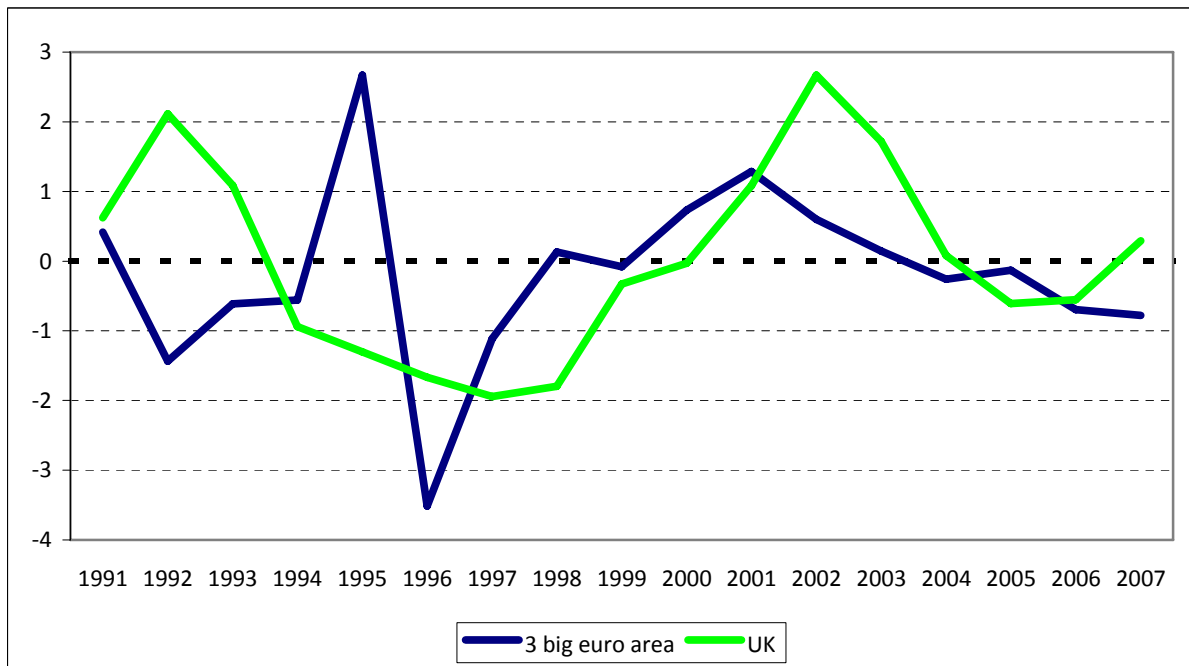
Fiscal impulse in the euro area and the US



Data source: OECD.

The comparison between the big three euro area countries and the UK exhibits the same discrepancy in terms of fiscal reactivity: one policy is mostly pro-cyclical and the other is mostly counter-cyclical.

Fiscal impulse in the euro area and the UK



Data source: OECD.

The paradox of the different approaches to fiscal policy in the last two decades within the euro area, outside the euro area in the EU 15 and in the US, can be illustrated by the evolution of the overall level of public debt. Even if fiscal policy and public finance have been constrained by Maastricht criteria and then by the Stability and growth Pact, public debt has actually been the highest in the euro area, and even higher in Germany, France and Italy, in the last decade, while it was lower there than in the US prior in 1991. It has indeed increased the most during the monetary convergence decade.

#### Public debt (in % of GDP)

	1991	1998	2007
Three big euro area	37,5	56,6	53,4
Euro area	45,0	53,4	44,8
EU non-euro	13,5	40,5	20,9
US	48,9	45,9	43,8

Source: OECD.

The euro area fiscal response in the crisis has so far been very timid, even while the economic context has continuously worsened, not to mention the fact that the fiscal response has not been coordinated between member states. Estimates by the IMF and OECD show how meagre the euro area fiscal response is so far compared to the US and the rest of the developed world: actually, according to the OECD, in 2008 and 2009, the euro area fiscal impulse will be negative.

#### Fiscal stimulus packages in large countries (in percent of GDP)

	2008	2009
Canada	0.0	1.5
China	0.4	2.0
France	0.0	0.7
Germany	0.0	1.5
Italy	0.0	0.2
Japan	0.4	1.4
U.K.	0.2	1.4
USA	1.1	2.0
Average	0.5	1.6

Data source: IMF.

## Fiscal impulse for 2008 and 2009, in % of GDP

	2008	2009
USA	3.5	6.1
Euro area	-1.2	-0.5
OECD	1.4	3.1

Data source: OECD.

### *The policy mix*

All in all, the evidence we have presented lead us to conclude that the policy mix in the euro area has been substantially more restrictive than in the non-euro area and in the US and that the reactivity of macroeconomic policies has been much weaker. This general pattern has been even more marked in the face of the current crisis. If “automatic stabilizers” were exceptionally efficient in the EU, that would have proved not to be a major problem.

### **The “structural” destabilization of Europe**

In the early 1990s, a theoretical and empirical case was made in favour of “structural reforms” promoting labour market flexibility and welfare state downsizing as the way out of massive unemployment for European countries. Virtually all of them, as well as EU institutions, embraced this new economic and social strategy and embarked on this program of “structural reforms”.

Yet, as noted in Fitoussi (2003), “there has been no convincing evidence that labor market institutions are responsible for the high level of unemployment in Continental Europe or for the disappointing macroeconomic performances for Europe during the 1990s. Economic outcomes are more easily explained by the big shocks that OECD countries have suffered: changing trend in productivity growth, the oil shocks, the important increase in the real rate of interest...At best empirical studies are able to explain second order of importance effects of institutions on unemployment...In market democracies, the institutional structure is not a powerful factor in explaining economic performance”<sup>6</sup>.

But it does not follow that the European “commitment to structural reforms” of social models was of no consequence. It indeed contributed both to an increase in economic vulnerability to economic shocks or decrease in economic resilience (the capacity of the economic system to respond efficiently to a given shock) and to an insufficiency in aggregate demand because of a too low wage level. More generally, the “automatic stabilizers” that are put forward in the current crisis by European countries have been weakened in the last two decades.

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<sup>6</sup> For empirical evidence of the absence of substantial empirical evidence between institutional features of social models and employment performance, see inter alia Fitoussi, Passet (2000), Freeman (2000), Palley (2004), Howell (2005), Baker et al. (2005), Freeman (2005).

As noted by Creel and Saraceno (2008), “the effectiveness of automatic stabilisers depends on the sensitivity of government revenues and spending to economic fluctuations and on the sensitivity of economic activity to cyclical changes in government revenues and spending. Among the factors affecting budgetary sensitivity, the literature highlights the size of the public sector, the progressivity of the tax and benefit system, the sensitivity of tax bases to economic fluctuations, the institutional time profile of the tax system, the level of unemployment benefits and the sensitivity of unemployment to fluctuations in economic activity.”

The authors review the different macroeconomic models that estimate the percentage of fluctuations in output which are smoothed by automatic stabilisers. They note that “the scope of automatic stabilisers in the EU is low: at best, they smoothed a maximum of 36% of economic fluctuations and at worst only 5% of them.”

After having assessed the evolution and state of a number of automatic stabilizers in the EU, the authors conclude that there is a contradiction between the European Union fiscal rules that are aimed at preventing discretionary fiscal policy and the fact that automatic stabilizers have been weakened: “On the one hand [the Stability and growth Pact] is designed with the objective to rule out any discretion in the conduct of fiscal policy, thus leaving to automatic stabilisation the exclusive burden of countercyclical policy; on the other hand, though, a number of stylized facts that we reported in the paper point to a significant decrease of the role of automatic stabilisation. Progressivity of the tax system and the size of the public sector have been reduced in most European countries, and structural breaks in the sensitivity of public spending to GDP changes appeared in the 1990s.”

In the following sub-sections, we are going to essentially confirm this argument, adding to the authors’ points the question of wages and labour market flexibility. We first start with the traditional automatic stabilizer, unemployment benefit.

### *Unemployment benefits*

As the OECD pointed out in 2007, “a number of OECD countries have lowered replacement rates or the duration of benefits since 1994”. Actually, the EU countries that did so followed the OECD Job study strategy recommendations. Whether by lowering the level or duration of unemployment benefit, there is little doubt that this automatic stabilizer has been significantly weakened during the last two decades in EU countries.

## Unemployment benefit systems: policy reforms over the 1994-2004 period

### Benefit generosity

	Replacement rates	Duration
Austria	[+, -]	
Denmark	+	+
France	-	+
Germany	[+, -]	+
Netherlands		+
Spain	+	-
Sweden	[+, -]	
UK	+	

#### Reading:

+ : Reforms following the OECD Jobs Strategy;

- : Reforms contrary to the OECD Jobs Strategy;

[+, -] : Reform elements going in different directions.

Data source: OECD.

This policy is part of a more general pattern of reform of labour market aiming at promoting flexibility, a flexibility that, during an economic downturn, becomes a liability and not an asset as people lose their jobs faster, driving down consumption and investment.

#### *Flexibility of the labour market*

One possible measure of increased flexibility in European labour markets is the OECD employment protection index. It shows that most of the reforms took place after 1994, with a substantial lowering of employment protection in the European Union under the form of change in temporary employment legislation, while permanent employment legislation remained unchanged in many countries.

## Employment protection in the EU 15

	Late 1980 to 1994			1994 to 2003		
	<b>Total change EPL</b>	Change in permanent employment legislation	Change in temporary employment legislation	<b>Total change EPL</b>	Change in permanent employment legislation	Change in temporary employment legislation
Austria	<b>0,00</b>	0,00	0,00	<b>-0,27</b>	-0,27	0,00
Denmark	<b>0,00</b>	0,00	0,00	<b>-0,90</b>	-0,02	-0,88
Finland	<b>-0,16</b>	-0,16	0,00	<b>-0,15</b>	-0,15	0,00
France	<b>0,20</b>	-0,08	0,28	<b>0,06</b>	0,06	0,00
Germany	<b>-0,08</b>	0,05	-0,13	<b>-0,74</b>	0,00	-0,74
Italy	<b>0,00</b>	0,00	0,00	<b>-1,63</b>	0,00	-1,63
Netherlands	<b>0,00</b>	0,00	0,00	<b>-0,61</b>	-0,02	-0,59
Norway	<b>0,00</b>	0,00	0,00	<b>-0,33</b>	0,00	-0,33
Spain	<b>-0,71</b>	-0,46	-0,25	<b>-0,05</b>	-0,18	0,13
Sweden	<b>-1,02</b>	-0,02	-0,99	<b>-0,24</b>	0,00	-0,24
United Kingdom	<b>0,00</b>	0,00	0,00	<b>0,15</b>	0,08	0,06

Data source: OECD.

In addition, part-time employment expanded rapidly in the last decade to represent in 2006 close to 20% of all employment in the euro area, with some countries like Germany or the UK at more than 25%.

	Persons employed working part-time (% of total employment)		
	1996	2001	2006
Euro area	14,1	16,1	19,5
Denmark	21,9	20,1	23,6
Germany	16,7	20,3	25,8
Spain	7,6	8,0	12,0
France	16,3	16,3	17,2
Italy	6,5	8,4	13,3
Netherlands	38,0	42,2	46,2
Austria	14,0	18,2	21,8
Sweden	20,2	21,1	25,1
United Kingdom	24,6	25,1	25,5

Data source: Eurostat.

This evolution shades some light on the increase in employment highlighted above. As the European Trade Union Confederation (2008) notes: “In fact, much of the increase in employment rates since 2000 can be explained by the rise in part-time jobs and the employment rate, expressed in full time equivalents, has hardly moved between 2001 and 2006 (from 58,2 to 58,9%)”. It also means that, as unemployment rises again, it will probably rise quite fast (the example of Spain, that with 7 million jobs created since the mid-nineties, accounts for an important part of all job creation in the EU is striking: the unemployment rate has doubled in 18 months to reach 16% in February 2009).

### *Wages in the EU*

Labour market flexibility has also been increased with regards to wages. Actually, the much-maligned European “wage rigidity” seems to have almost completely disappeared in the EU 15 since 2000, with real wages growth declining in almost all countries. The euro area countries, especially Germany, Italy and Spain, have exhibited close to zero and even negative evolution of real wages since 2000, while EU 15 non euro-area countries displayed better performance, as did Norway. This seems to reflect a trend towards wage disinflation in the euro area to which we will come back in the next section.

Average annual growth rates of real average wages (%)

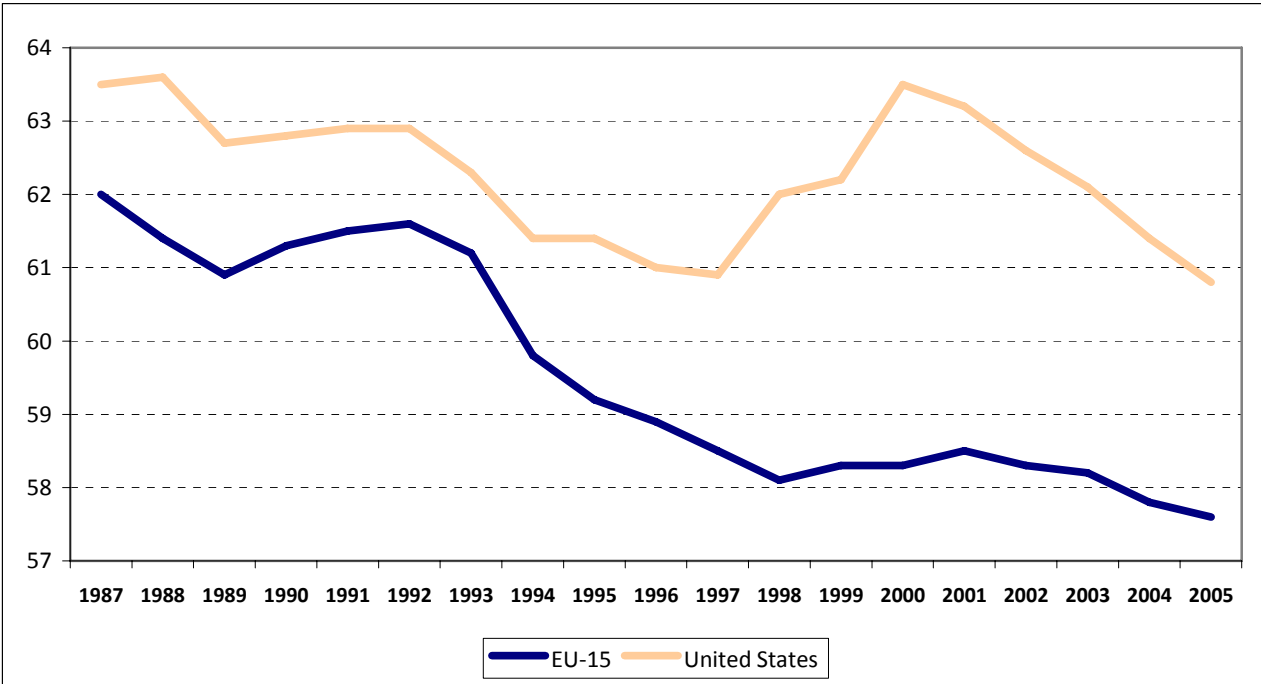
	1990-1995	1995-2000	2000-2005
Austria	1,8	0,4	0,9
Finland	0	1,3	2,5
France	1,1	1,3	1,3
Germany	2,1	0,8	0,2
Italy	-0,7	0,8	0,2
Netherlands	0,3	0	0,5
Spain	1,9	-0,5	-0,4
Denmark	0,8	1,6	1,5
Sweden	-0,2	3,2	1,5
United Kingdom	0,9	2,5	1,6
Norway	1,2	1,9	3,6
OECD Europe	1,4	1,4	1
EU-15	1	1,1	0,7

Data Source: OECD.

When weighted by their GDP, it appears that the euro area countries have experienced a sharp decline in real wages growth in the last decade, so much so that wages did not, for the most part of the period, compensate labour productivity and inflation. The gap between wages, on the one hand, and productivity and inflation on the other, amounted to almost 7.5 percentage point from 1996 to 2007.

As a result of this general evolution, the wage share in value added, that had already substantially decreased in the 1980s, declined further in the 1990s and the 2000s. The total decline in wage share in the EU 15 for the last two decades has been close to 5 points, while it was only 2 points in the US.

Share of total wages and salaries in total value added, percentage



Data source: OECD.

*Tax policy*

Finally, the evolution of tax policy is important in two ways for our story. First, because the intensity of corporate and high income taxation determine in part the efficiency of automatic stabilizers, but also because the degree of redistribution of the tax system is itself an automatic stabilizer. In this respect, the fierce tax competition between EU countries in the last two decades has lead to a spectacular decline of corporate taxation.



## Corporate tax rate, in %

	Average EU 15*		USA		Japan	
	effective	statutory	effective	statutory	effective	statutory
1987	29%	48%	23%	38%	42%	55%
1997	22%	38%	24%	39%	37%	50%
2005	21%	32%	24%	39%	28%	40%

\* Average EU 15 is un-weighted average of France, Germany, UK, Italy, Spain, The Netherlands, Norway, Austria, Sweden.

Data source: updates database from Devereux, M.P., R. Griffith and A. Klemm (2002) "Corporate income tax reforms and international tax competition" *Economic Policy*, 35: 451-495.

This evolution led to the fact that, according to OECD data, EU 15 countries had in 2008 the the lowest corporate taxation rates when compared with similarly developed countries and also in the fact that, according to KPMG annual study, in 2007 the EU became the region where corporate taxation was the lowest in the world.

Laurent (2006) showed how the development of capital mobility in the EU without tax harmonization has triggered this spectacular fall in corporate taxation that in turn has triggered a spectacular fall in high-income taxation that in turn has affected personal income taxation and eventually the relative tax burdens put on capital and labor. The first dynamic occurred between 1986 and 1993 and was analyzed by the European Commission itself. The European Commission (1996) noted that "while the taxation of labour has been increasing, the taxation of factors of production other than labour has shown an overall decrease" and that "the stability of total tax revenues has been achieved at the cost of a progressive alteration in the structure of taxation: the tax burden has been shifted to the less mobile tax base - labour - in order to recover the tax lost from the erosion of other more mobile bases." The European Commission estimates that "Between 1980 and 1993, the implicit tax rate<sup>7</sup> on employed labour for the Community as a whole grew by about one fifth while the same indicator for other factors of production - mainly self-employed labour and capital - decreased by more than a tenth." The European Commission (1997) similarly stated that "over the last 15 years...the implicit tax rate on employed labour has increased by more than 7 percentage points, whereas the same rate for other factors of production (capital, self-employed labour, energy, natural resources) has decreased by more than 10 percentage points."

The dynamic between the mid-1990s and today is more complex. It is so because taxation on low-skilled labour has been lowered as part of the new European employment strategy in the late 1990s (which explains why labour productivity has simultaneously fallen) so that another division than just between capital and labour taxation is needed to fully grasp the shift in taxation burdens that occurred during the last decade. The additional category that must be

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<sup>7</sup> "From a macroeconomics point of view, a tax rate is calculated by dividing the revenues from taxes on a special activity or good by an appropriate corresponding aggregate tax base from national accounts statistics. This yields the implicit tax rate (ITR), sometimes also referred to as an average or effective tax rate." *Source*: Coded, Eurostat, <http://forum.europa.eu.int/irc/dsis/coded/info/data/coded/en.htm>

used is indirect taxation: in the last decade, in a number of EU 15 countries, the tax burden has been shifted from direct to indirect taxation reflecting the intensity of tax competition but also the need to limit taxation on low-skilled labour.

	Marginal personal income tax rate		Value added tax rate	
	2000	2006	2000	2007
Austria	41.31	44.88	20	20
France	39.27	36.78	20.6	19.6
Germany	60.85	58.97	16	19
Italy	40.43	37.1	20	20
The Netherlands	53.06	45.02	17.5	19
Spain	28.83	28.83	16	16
Euro area	44.18	41.65	18.67	19.38

Data source: OECD.

We thus conclude that automatic stabilizers were indeed substantially lowered for most EU countries, and especially those in the euro area, which lead us to confirm our earlier assessment: the European position in the current crisis with regards to its macroeconomic response relies on the false assumption that automatic stabilizers are strong enough so that a discretionary macroeconomic response is not necessary. It is in our view necessary. We now conclude with some hypotheses as to why the two shifts we have signalled happened.

### **The false virtue of rules and the economic consequences of the size of nations**

European countries belonging to the euro area, but more generally EU 15 countries involved at different stages of EMU, have relied on rules to govern their macroeconomic policies and those rules have not served them well in the last two decades. Moreover, these rules have brought about a culture of discipline but not of cooperation and they led to a nominal and largely artificial and therefore fragile convergence. One empirical measure of it is the degree of divergence before and after monetary union between euro area member states in terms of inflation and real long-term interest rates on the one hand, and in terms of real growth and current balance on the other. The result is eloquent: while nominal convergence has been improved, simultaneously real divergence has been aggravated.

### Standard deviation for euro area countries

	Inflation rate	Real long-term interest rates	Real GDP growth	Current account (in % of GDP)
Average 1979-1991	5,65	1,74	0,90	2,34
Average 1992-1998	2,29	1,05	1,56	3,96
Average 1998-2007	0,73	0,85	1,54	5,07

Data source: OECD.

Hence the disappointing European response to the current crisis in terms of fiscal and regulation policies so far: European interest rates are not congruent after two decades of economic integration. The last column of the table is of utmost importance: it shows the degree of current account divergence and this divergence is at the heart of our first explanation for the two shifts in macroeconomic and social policies we have been describing in the two previous sections. Our reasoning is straightforward: the paralysis of macroeconomic instruments has pushed European states in the euro area to develop non cooperative competitiveness policies, using social-tax competition and wage disinflation. The economic policy of Germany in the 2000s is emblematic of this strategy, as were in the mid-1980s the competitive disinflation strategy in France.

The country size nexus comes into play in the following way<sup>8</sup>: whereas countries not belonging to a monetary union can control their fiscal and monetary policy and manipulate their external nominal exchange rate in case of necessity, countries in a monetary union cannot do so, and have to live with constraining rules on fiscal policies, the common interest rates and the common external exchange rate. For a small open economy, this loss is not very costly: traditional fiscal policy of the Keynesian type will usually be of little efficiency, whereas all policies that improve the competitiveness of the national economy by lowering production costs of firms located in the domestic economy are relatively more powerful. Tax competition, “structural reforms” and wage moderation policies will indeed all have very powerful, positive effects for a small open economy, both because domestic demand represents a fraction of demand to domestic firms and because the elasticity of net exports is higher, the smaller and the more open the economy is. In addition, policies that lower production costs in a small economy do not harm domestic demand very much, and they have little incidence on domestic inflation, so that they do not raise real interest rates, as nominal rates in a monetary union tend to be uniform across countries and to be relatively less influenced by the policies of a single, small country.

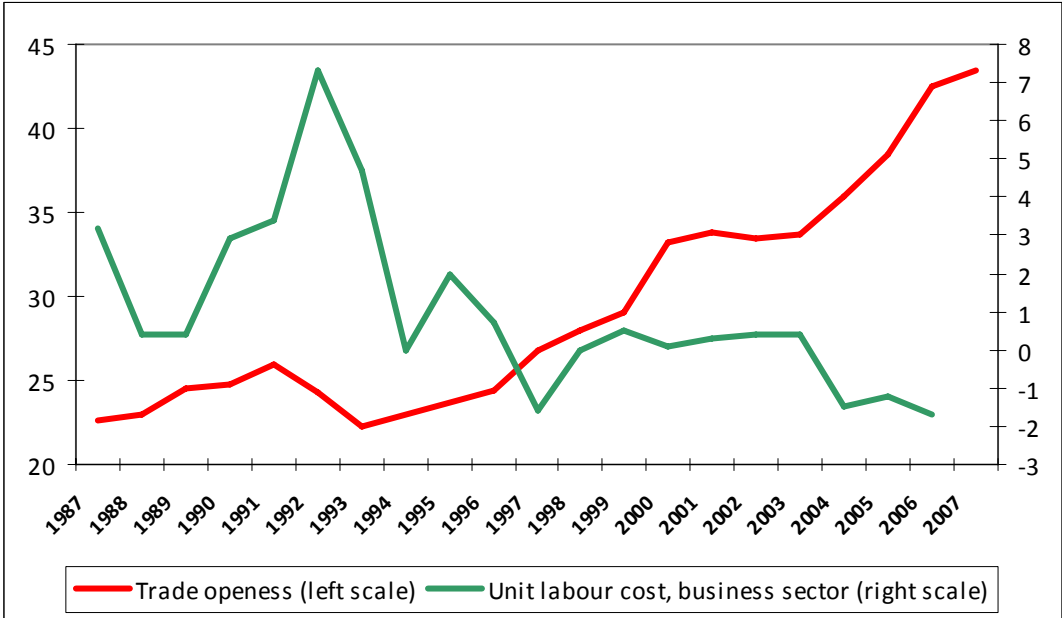
For large countries on the contrary, the various policies reviewed above tend to be more costly. Keynesian-style demand-management policies, especially fiscal policies, are more efficient for large relatively closed economies than for small open economies. On the other hand, all policies tending to lower production costs are less effective, and they all tend to lead to a lower domestic inflation, which then results in a higher real interest rate, so that they tend to be costly in terms of economic activity and growth. This is where the rules constraining the

<sup>8</sup> See Le Cacheux (2005), Laurent and Le Cacheux (2006) and Laurent and Le Cacheux (2007).

use of stabilization policies in the Euro area are paramount: they are much more painful for large countries than for small nations. For this reason, the Maastricht “culture of discipline” and the European commitment to “structural reforms” have hurt large countries much more than small ones in the euro area, while outside the euro area the macroeconomic performance of Denmark, Sweden and the UK does not differ a great deal.

The case of Germany is particularly striking. Laurent and Le Cacheux (2007) noted that if the German competitiveness effort has been a huge success in terms of growth of net exports since 2000, it is still hardly compatible with the fact that Germany is a large country. It appears that the “shrinking” of Germany has, so far, been a counter-productive small country growth strategy in fair weather. But the situation of Germany in 2009 highlights the danger of this strategy in time of crisis: exposure to international trade acts as an “economic destabilizer”.

Trade openness and unit labour cost in Germany, 1987-2007



Data source: OECD.

So why did Germany choose it in the first place? One can argue that in the face of globalization, all countries have become small and that Germany simply decided to acknowledge this fact. But Germany is first and foremost part of European integration. As such, it is subject to the incentives system devised by the “European economic constitution” whereby large countries are encouraged to behave like small ones, competing through real “social disinflation”, adopting competitiveness policies focused on labor cost reduction instead of stimulating their domestic market through macroeconomic policies. Since large continental countries are precisely not small, the results are neither good for them nor for the euro area. These policies have in return triggered strategic reactions from the other large countries, which in turn engage in the social race to the bottom. Hence the relation between the two shifts we have highlighted.

The paradox of course is that monetary union was created *inter alia* to avoid non-cooperative competitive disinflation strategies seen in the 1980s and not to find new ways to continue it by other means. As euro area member states rationally behave like a collection of small competing economies instead of a single cohesive one, pursuing competitiveness at the expense of one another, monetary union runs the risk of being turned into a zero, or even a negative-sum game. The recent evolution of tax competition on corporate taxation is a salient illustration of how not only small countries compete against large ones in the Euro area, but also large ones among themselves. Wage disinflation by Germany is another case in point. If the euro area continues to be run like a collection of competing small economies, the result will not only be slow regional growth and persistent unemployment, but also growing divergence among member states and rising political tensions. The difficulty for the euro area to develop a consistent, coordinated and adequate response to the crisis can be read as a symptom of this pathology.

## **Two deep determinants: public social custom and a new norm of inequality**

### *Public social custom*

Fitoussi and Saraceno (2004) have tried to explain why and how inefficient rules governing macroeconomic policies and inefficient and unfair “structural reforms” have been implemented in the EU. They insist on reputation effects in European institutions and note that: “a newly elected government, regardless of its political colour and mandate, must show to its EU partners that it is in fact worthy of sitting at the table. As a consequence, it will adhere to the mainstream agenda regardless of its convenience and of the electorate preferences. Paradoxically, governments whose constituencies care more about the social contract, will be those who must work harder to convince the partners, pushing the reforms aimed at dismantling the contract itself”.

### *A new norm of inequality*

Fitoussi (2006) puts forward an even deeper determinant to explain the difference in macroeconomic policies management in the euro area and in the US. If one assumes that over the past decades social norms have changed and that the new norms call for a greater degree of inequality, then “macroeconomic policies have to be active where the social protection system is weak or equivalently where the degree of inequality has reached the level required by the new social norms. Otherwise a slowdown of growth, not to say a recession, would have such far reaching consequences, that it will endanger the legitimacy of the economic system.” In the EU, “by making the burden of adjustment fall on the social protection system, restrictive macroeconomic policy show its effectiveness, once its implicit goal of increasing the degree of inequality – i.e. to adapt to the new social norm – has been recognized.” In other words, “macroeconomic policies have to be active where this higher degree of inequality has been achieved – in the United States – and passive where it has not, so as to achieve it [the EU].”

The dynamic of income inequality in the EU in the last two decades indeed shows that many EU countries have witnessed a strong increase in income inequality at odds with their historical commitment to fairness and redistribution.

### Trends in real household income by quintiles

	Bottom quintile	Middle three quintiles	Top quintile
(Average annual change mid-1980s to mid-1990s)			
OECD-22	1,2	1,4	2,1
Average EU 9*	1,2	1,6	2
(Average annual change mid-1990s to mid-2000s)			
OECD-22	1,5	1,8	1,9
Average EU 9*	1,3	1,6	1,8

\* The un-weighted average for the 10 countries in the project, minus Norway.  
Data source: OECD.

### **Conclusion: for a comprehensive approach to national models**

As James Buchanan and Geoffrey Brennan put it, “good games depend on good rules more than they depend on good players”. If macroeconomic policies have not lead to efficiency and fairness in the EU in the last two decades as we tend to think, then European leaders should not take the blame for it. It is more likely the design of economic policy institutions that led to wrong incentives, especially in the heart of Economic Europe, the euro area. We have tried to make clear that those inefficient macroeconomic rules had a spill-over effect and that brings us to our final point.

There has been a tendency in the literature to taxonomize social models and to categorize them according to their degree of equity or efficiency (see Sapir, 2005). Contrary to this position, we think that national “models” or better yet systems should be assessed in an integrated manner, by taking into account social *and* macroeconomic policies. With this comprehensive approach, it would be harder to miss inconsistencies and spill-overs.

## References

Fitoussi, J.-P. (2003), "The Beveridge Curve, Unemployment and Wages in the OECD from the 1960s to the 1990s: Comment", in P. Aghion *et al*, (Eds.), *Knowledge, information, and expectations in modern macroeconomics: In honor of Edmund S. Phelps*, pp. 432-40, Princeton and Oxford, Princeton University Press.

Fitoussi, J.-P. and O. Passet (2000), *Réduction du chômage: les réussites en Europe*, 23. Paris, La documentation française

Fitoussi, J.-P. and F. Saraceno (2002), "A Theory of Social Custom of Which Soft Growth May Be One Consequence. Tales of the European Stability Pact." *Observatoire Français des Conjonctures Économiques Document de Travail*, 2002-07, October.

Freeman, R. B. (2000), "Single Peaked Vs. Diversified Capitalism: The Relation Between Economic Institutions and Outcomes", *National Bureau of Economic Research Working Paper*, 7556, February.

Freeman, R. B. (2005), "Labour Market Institutions Without Blinders: The Debate over Flexibility and Labour Market Performance", *NBER Working Paper* 11286, April.

Nickell, S., L. Nunziata, W. Ochel and G. Quintini (2003), "The Beveridge Curve, Unemployment and Wages in the OECD from the 1960s to the 1990s", in P. Aghion *et al*, (Eds.), *Knowledge, information, and expectations in modern macroeconomics: In honor of Edmund S. Phelps*, pp. 394-431, Princeton and Oxford, Princeton University Press.

David R. Howell, 2005, Fighting Unemployment: Why Labor Market 'Reforms' Are Not the Answer in Jonas Olofsson, ed., Den Tredje Arbetslinjen.

David R. Howell, Dean Baker, Andrew Glyn and John Schmitt "Are Protective Labor Market Institutions at the Root of Unemployment? A Critical Review of the Evidence », Revised August 27, 2006.

Palley T.I. (2004), « The Causes of High Unemployment: Labor Market Sclerosis versus Macroeconomic Policy », in Hein E., Heise A. and Truger A. (eds.), *Wages, Emploi, Distribution and Growth*, Palgrave/Macmillan: London, 2006. <http://tinyurl.com/57e6mc>

Fitoussi, J.-P., Laurent, É Le Cacheux, J. (2007). « L'Europe des biens publics » in Fitoussi, J.-P. and Laurent E. (eds.), *France 2012: E-book de campagne à l'usage des citoyens*, OFCE, 2007.

<http://www.ofce.sciences-po.fr/pdf/ebook/ebook315.pdf>

Laurent, É. and Le Cacheux, J. (2006) “Integrity and Efficiency in the EU: The Case against the European economic constitution” (with), *Working Paper Series* n°130, Center for European Studies, Harvard University, March.  
[http://www.ces.fas.harvard.edu/publications/docs/abs/Laurent\\_LeCacheux\\_abst.html](http://www.ces.fas.harvard.edu/publications/docs/abs/Laurent_LeCacheux_abst.html)

Jérôme Creel OFCE and Francesco Saraceno, “Automatic Stabilisation, Discretionary Policy and the Stability Pact », OFCE WP, 2008.

Laurent, É. and Le Cacheux, J. (2007) « The Irish Tiger and the German Frog : A Tale of Size and Growth in the Euro area » (with Jacques Le Cacheux), *OFCE Working Paper Collection ANR n°3*, October 2007. <http://www.ofce.sciences-po.fr/pdf/dtravail/WP2007-31.pdf>

Fitoussi, 2006, “Macroeconomic policies and institutions”, *OFCE Working Paper* n° 2006-06, April <http://www.ofce.sciences-po.fr/pdf/dtravail/WP2006-06.pdf>

Fitoussi, J-P. 1995. *Le débat interdit : monnaie, Europe, pauvreté*. Paris: Arléa.

Fitoussi, J-P. 2002. *La règle et le choix*. Paris: Seuil.