

# The cost of deficiencies in euro area economic policy coordination

Between 2011 and 2015, the total growth differential between the United States and the euro area, expressed in GDP per capita, amounted to around five percentage points. Above any differences in potential growth, can this gap be explained – and to what extent – by a lack of coordination in national economic policies in the euro area?

What are we referring to when we talk of “coordination”? It is important to define its scope and modalities in order to find an estimate: in its narrowest sense, it refers to the fiscal stance of the euro area and its distribution by country; a broader interpretation could include the potential gains of a better macroeconomic policy mix, ranging from collective incentives to actively carry out structural reforms favourable to growth, to the implementation of a European investment financing policy and improved crisis management.

A relatively broad range of estimates can be generated when the degree of flexibility of the envisaged policies and the uncertainty surrounding coefficients are taken into account. Focussing on the 2011-2013 period, it is estimated that the potential gains in welfare from policies of fiscal fine-tuning in response to economic changes vary from one to two percentage points of GDP. More significant gains would be derived from the positive effects of coordinated structural reforms in terms of potential growth and crisis prevention (financial stability). Coordinated wage policies responding to the relative situation of each country would further add to these gains.

Key words: economic policy coordination, European policy mix, fiscal consolidation costs, structural reform gains

JEL codes: E61, E62, F45

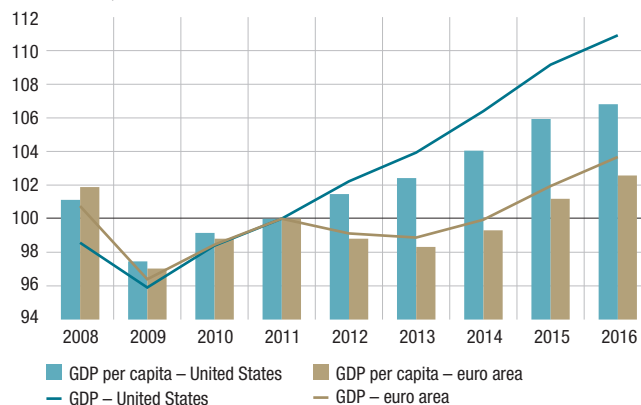
NB: This paper benefitted from the contributions of Carine Bouthevillain, Bruno Cabrillac, Antoine Devulder, Pavel Diev, Pierre Sicsic and Édouard Vidon.

## Key figures

**From 0.8 to 1.9 percentage points of GDP**  
 opportunity cost in terms of growth of fiscal policy non-coordination

**From 2 to 3 percentage points of GDP**  
 estimated cost of deficiencies in economic policy coordination (fiscal and structural)

Growth in GDP and GDP per capita in the United States and the euro area (index with 2011 = 100)



Sources: IMF and Eurostat.

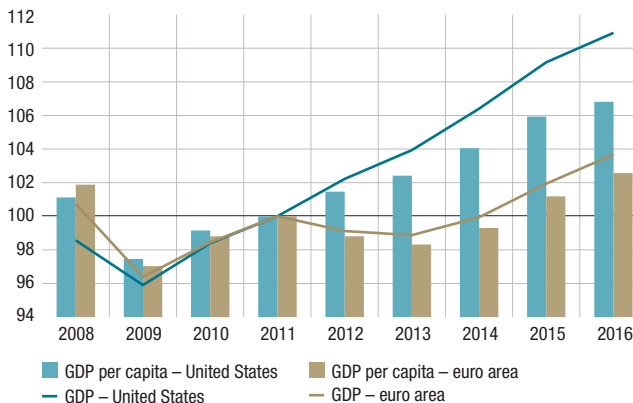
**Introduction: economic policy coordination**

Between 2011 and 2015, the total growth differential between the United States<sup>1</sup> and the euro area was 7.5 percentage points. Expressed in GDP per capita, this relative under-performance of the euro area economy amounted to around five percentage points. Above any differences in potential growth, can this gap be explained – and to what extent – by a lack of coordination in national economic policies in the euro area?

For the purposes of this article, we will consider that national economic policies refer to fiscal and structural policies rather than monetary policy, which is common to the euro area. The repercussions of these economic policies can be felt beyond national borders. A typical example is stimulating domestic demand, which leads to excess demand in neighbouring countries, largely through the channel of international trade. The objective of coordination is to better calibrate economic policy at European Union level. A policy that is optimal at the national level is rarely optimal at a collective level as individual Member States do not take into consideration the externalities of their decisions on other Member States. When each state acts in isolation, the result may be a sub-optimal situation for all (see Box 1, “The prisoner’s dilemma and economic policy coordination”).

While national economic policy coordination may be desirable at the international level, it would appear to be indispensable in a monetary union. Building a collective strategy would allow the limits imposed by the existing level of coordination to be pushed back. Growth and employment would be stronger in Europe with a collective economic strategy, which would combine more structural reforms where they are a priority, such as in France, with more fiscal support in countries with fiscal leeway, within the rules of the Stability and Growth Pact, such as in

**C1 Growth in GDP and GDP per capita in the United States and the euro area**  
(index with 2011 = 100)



Sources: IMF and Eurostat.

Germany. The calibration and implementation of this optimal strategy requires a credible European institution with the needed legitimacy.

**1. Estimate of the effects of deficiencies in euro area fiscal policy coordination**

**Estimates for the 2011-2013 period**

This period was marked by an excessively rapid fiscal consolidation (adjustment) in the euro area, and as a result has been the subject of numerous analyses. The historical cost since 2011 of fiscal non-coordination has been examined from the perspective of the gains that could have been made by “optimising” the size of the fiscal adjustment and its allocation by country. Using the NiGEM model,<sup>2</sup> Holland and Portes (2012) assess the impact of fiscal consolidations on growth between 2011 and 2013. They note that part of the negative impact on growth results from the effects of “spillovers” (cross-border externalities) between countries. They seek to measure the relative weighting of these effects by conducting simulations using (i) the model multipliers and (ii) unilateral multipliers.

<sup>1</sup> The gap between the real GDP of the United States and of the euro area, 2011 = 100.

<sup>2</sup> Macroeconomic model of the National Institute of Economic and Social Research.

## Box 1

## The prisoner's dilemma and economic policy coordination

The “prisoner’s dilemma” is an example of a static game in which the Nash equilibrium (the best mutual response of each player) is non-cooperative. The players have a choice between two actions (strategies): (i) cooperate (noted C); or (ii) defect (noted D), decided simultaneously without any possibility of communication. The gains made by the two players in each of the different configurations are summarised in the following matrix:

		Player 2	
		C	D
Player 1	C	1, 1	-1, 2
	D	2, -1	0, 0

Strategy D dominates strategy C for each player, i.e. the strategy that “if the other player cooperates, I’ll defect; if the other player defects, I’ll defect too”. Therefore, irrespective of the other player’s action, the optimal individual strategy is to defect. Consequently, the outcome of the game is DD, even though the players could have both gained more had they cooperated. At first glance, this unfortunate outcome appears irrational. If the game is repeated over time, cooperation becomes possible under certain conditions. Repetition introduces the possibility that future actions may be conditioned by the actions during the previous phases of the game (an implicit form of coordination). In an infinite horizon game, it can be demonstrated that if the players have a low preference for the present, the following strategies are equilibrium strategies: “Cooperate at first, and continue to cooperate for as long as the other player does not defect; if the other player defects, defect for the remainder of the game”. Under these conditions, a possible outcome is that the two players cooperate indefinitely, as the immediate gain of deviating from the strategy (defecting while the other cooperates) is more than offset by the long-term cumulated losses resulting from the penalty of non-cooperation that follows. Within the framework of so-called “cooperative” games, players can communicate and enter into binding agreements – in other words, form coalitions.

The situation described by the prisoner’s dilemma – one that is clearly beneficial for society as a whole but that does not occur spontaneously as a result of combined individual choices – can manifest itself when externalities or public goods (for example, the consequences of pollution, or more generally, spillover effects) exist in the economy. Let’s take the example of two countries (France and Germany, although the situation can be generalised to two regions or two groups of countries) that have two economic policy tools: fiscal spending and structural reform. Here we will look at the fiscal policy in Germany and the structural policies in France because of the respective leeway existing in each of these policies in each country. As soon as externalities between countries exist, i.e. when fiscal spending in Germany provides gains to France and structural reforms in France provide gains to Germany, it is easy to see that the individual solution is not necessarily optimal collectively. In other words, a “central planner” (or coordinator) will demand more structural reforms in France and more fiscal spending in Germany. However, when a country cooperates (implementing the economic policy effort that is beneficial to the other country) while the other defects, the latter obtains a higher gain and the former receives a lower gain. The payment matrix thus has the same structure as that of the prisoner’s dilemma and the optimal policy will not be implemented spontaneously. The situation can be corrected by the implementation of contractually binding agreements between countries (see cooperative games) under the aegis of a “coordinating institution”.

Simultaneous fiscal consolidation (all countries at the same time for values identical to those observed between 2011 and 2013) that is perceived to be non-coordinated and sub-optimal worsens the negative impact on GDP by 2% on average.

These spillover effects are also assessed by In 't Veld (2013) using the European Commission's multi-country model, QUEST. The author evaluates the impact of fiscal consolidations conducted in the euro area between 2011 and 2013 taking into account the context of the financial crisis (financial constraints on households and zero lower bound constraint on policy rates). He demonstrates that the impact on GDP varies depending on the consolidation's composition (revenues or expenditure) and the openness of the economies. The spillover effects measured by channels of demand and international flows reinforce the negative impact on growth. Comparing the effects on GDP in the scenario of simultaneous consolidations with the case of a country acting in isolation, he obtains an additional reduction in GDP of between 1.6% and 2.6%.

A variety of recent studies seek to measure, based on macroeconomic model simulations, the impact of a deficit financed stimulus of public investment in countries with a fiscal surplus, both at a domestic level and on the other euro area countries through an analysis of the spillover effects. The majority of the studies conclude that this stimulus has a positive, though fairly limited, impact for the euro area as a whole. The effect is, however, reinforced by certain assumptions, the most important being the one that modifies the normal monetary policy reaction, which is constrained by the zero lower bound on nominal interest rates.

In 't Veld (2016) uses the QUEST model to measure the impact of simultaneously increasing public investment in Germany and the Netherlands by 1% of GDP. When monetary policy is accommodative (there is no increase in policy rates in response

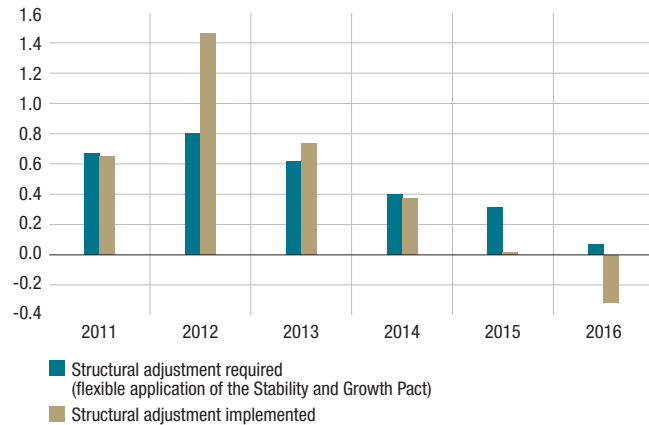
to rises in inflation for two years), the spillover effects (through the trade channel) on the rest of the euro area are significant, amounting to around 0.3% in the short and medium-term. The impact on German and Dutch growth is 0.9% and 0.7%, respectively, in the short-term and 1.3% over a ten-year horizon. The effects can be even more significant when the investment is made in projects with better returns (higher long-term GDP elasticity to the stock of public capital). The spillover effects then increase at 0.5% while the long-term impact on the GDP of Germany and the Netherlands reaches 2.4%. If the assumption of low borrowing costs (as is currently the case) is applied to the simulation, the increase in public debt for countries with a budget surplus would be small, and the spillover effects could lead to a slight improvement in debt ratios in the rest of the euro area.

The Bundesbank presented relatively similar results in its August 2016 Monthly Report. The NiGEM model was used to simulate a deficit-financed expansion of public investment in Germany of 1% of GDP over two years. By constraining monetary policy to the zero lower bound, the GDP in Germany increases by 0.5% and the spillover effects on the rest of the euro area come out at just under 0.2%. Factoring in reduced outflows of government expenditure to imports if the stimulus was implemented through public consumption (mainly public sector wages), GDP in Germany would be pushed up to a greater extent, while the spillover effects would be smaller.

The consolidation observed between 2011 and 2013, based on the overall change in the primary structural balance of general government, is now estimated by the European Commission at almost 2.9% of potential GDP, revised downwards from the estimated 3.3% used in the research of Holland and Portes (2012) and In 't Veld (2013). Above all, the fiscal effort was 1.5 percentage points of GDP in 2012 (in excess of the Commission's recommendations)

and 0.7 percentage points in 2013. The efforts were extremely significant in 2012 and 2013 in Spain and Italy (three percentage points of GDP and two percentage points of GDP, respectively) and noteworthy in Germany (one percentage point) and France (0.8 percentage point). Fiscal consolidation in 2012 probably triggered a downturn in demand at a time when the output gap was significant at -2.2%. Above all, the effect of the consolidation in Germany triggered an opening of the output gap, which went from 0.8% in 2012 to -0.3% in 2013. This shows that everybody pays the price of inadequate coordination. According to Trésor-Éco (2016), exploiting fiscal leeway from 2011 to 2013 would have helped to reduce the structural adjustment by 0.8 percentage point over the period.

C2 Structural adjustments in the euro area, implemented and required (% of GDP)



Sources: European Commission, 2016 spring forecasts, Banque de France calculations.

Box 2

The aggregate effects of a fiscal shock depend on the source location

In principle, for a given aggregate size of fiscal shock, and in the absence of financial effects, its impact on the euro area should be of the same order of magnitude depending on whether it occurred simultaneously in several countries, or even all the countries, or it occurred in isolation in a single country. For example, the overall impact on euro area GDP would be the same with a shock of one percentage point of GDP across the whole of the euro area, or with a shock of two percentage points of GDP across half of the euro area; differences would only depend on the national multipliers and the degree of financial openness to third countries. However, this result does not take account of any possible links between the fiscal trajectory and financial variables. In the light of recent examples of fiscal consolidation in the euro area, it is only right to take into consideration how national financing conditions react to fiscal consolidations.

In the event that a consolidation is not credible (perceived by private agents as temporary) and is aggressive (which affects the speed with which agents learn to come to terms with the permanent nature of the shock), the fiscal multiplier would be higher and in the short term the recessionary impact of the consolidation could offset the sought after effects of reducing public debt. The consolidation would then conversely reinforce the stresses on sovereign bond yields, reducing the short-term benefits of a consolidation in the countries experiencing a sovereign debt crisis.

In practice, the stresses on sovereign bond yields have “over-constrained” fiscal policy in countries under pressure from the markets: these countries have had to implement fiscal overshoots, while those countries with fiscal leeway have not introduced stimulus packages to offset the overshoot. In this instance, the geographical location of the fiscal adjustment is significant and coordination becomes all the more necessary.

### Our estimate

A plausible alternative scenario, close to the European Commission's "rule of thumb" (a trade-off between the constraints of stability and sustainability), could have consisted of:

- in 2012: consolidation with a change in the structural balance of 0.8 percentage point in France, Italy and Spain as well as a modest fiscal expansion of 0.5 percentage point in Germany. These assumptions lead to a smaller aggregate consolidation in the four largest European countries by 1.1 percentage points of GDP;
- in 2013: the consolidation effort could have been limited to 0.2 percentage point instead of the 0.7 percentage point of GDP of the observed adjustment.

Thus, plausible scenarios for fiscal coordination efforts could have resulted in a smaller consolidation of between 0.8 percentage point and 1.6 percentage points of GDP between 2012 and 2013.

### Fiscal multipliers and intra-euro area spillovers

According to the elasticities derived from the Eurosystem projections, the effects of a fiscal stimulus in the euro area of 1% of GDP would prompt a 1.2 to 1.3 percentage point increase in the level of GDP after two years for a fiscal stimulus implemented through consumption or public investment. For the same level of fiscal stimulus implemented through tax cuts (direct or indirect), GDP would increase by 0.6 to 0.8 percentage point after three years. This effect includes trade spillovers between the euro area countries, which account for around 0.1 to 0.3 percentage point (i.e. the aggregate multiplier at the euro area level is greater than the average national multiplier due to outflows to imports).

In addition to the types of public revenues and expenditure, multipliers can vary depending on:

- the monetary policy reaction (assumed to remain constant in the calculation of standard elasticities): a countercyclical reaction would dampen part of the fiscal stimulus and consequently reduce the size of the multipliers. In principle, the zero lower bound helps to strengthen the multiplier, even if the announcement in 2012 of the OMT<sup>3</sup> and the resulting easing of monetary conditions could be conditional on the implementation of fiscal consolidation;
- the credibility (or lack of credibility) of the fiscal consolidation (i.e. permanent or temporary), also with the specific conditions of crisis periods, as political uncertainty is interrelated with the credibility of the fiscal measures;
- the spillover ratio (indirect impact by trade/direct impact): approximately 30% for expenditure and 23% for revenues according to Eurosystem elasticities. In certain simulations such as Trésor-Éco, 2016, it reaches levels comparable to those of the direct impact of fiscal consolidations between 2011 and 2013.

Overall, a multiplier of 1 to 1.2 could be applied to a fiscal policy that targets public investment. Combined with a lesser consolidation effort, of 0.8 to 1.6 percentage points of GDP between 2012 and 2013 resulting from a more flexible coordinated fiscal stance as described above, the opportunity cost in terms of growth of deficiencies in fiscal policy coordination in the 2011-2013 period would amount to 0.8 and 1.9 percentage points of GDP. It is important to note that these estimates come from studies that do not take account of the role of better adapted wage policies in each country, and particularly the role of a wage stimulus package in countries with full employment and a trade surplus.

<sup>3</sup> Outright Monetary Transactions (OMT) programme.



## 2. Structural reform coordination and incentives

### Macroeconomic effects of structural reforms

Despite the economic policy recommendations for the euro area as a whole and the country-specific recommendations issued within the framework of the European Semester, euro area countries remain poorly coordinated in terms of structural policies to promote growth and results fall short of expectations. Full coordination would aim to accelerate the implementation of recommendations, thereby enabling gains in real and potential GDP.

Gains in potential growth might also be expected from the creation of a Financing and Investment Union, which would help to reduce European financial market fragmentation.

Based on the trajectories estimated in Cette et al. (2016), a convergence of competition and employment protection laws towards the national legislation that was considered to be the most flexible in the euro area at the beginning of the 2010s would have raised GDP in the euro area by 1% in 2016 and by almost 2% after ten years.

Varga and In 't Veld (2014) widen the scope of reforms to be taken into consideration and estimate that if Member States adopted the regulations and systems of the three best EU performers for each of the areas studied (market competition and regulation, tax reform, unemployment benefit reform, other labour market reforms, human capital investment and R&D investment), euro area GDP could be up to 6% higher after ten years.

### Intra-euro area spillovers from structural reforms

This estimate does not take account of the spillover effect of these reforms on other member countries, which could be negative, in the case of a reduction

in labour costs in exposed sectors for example, or positive, if the increased purchasing power resulting from a reform of the goods market is considered. Rivaud (2015) highlighted the heterogeneity across countries and therefore their different reactions to reforms. The NiGEM macroeconomic model, like Varga and In 't Veld (2014), shows that the simultaneous implementation of structural reforms is advantageous. This contrasts with Eggertsson et al. (2016), who find that in the event of global secular stagnation, reforms to improve competitiveness (internal devaluations) lead to gains in growth in one country at the expense of its neighbours, even within a monetary union, particularly when monetary policy is constrained by the zero lower bound.

An ongoing study by the Banque de France demonstrates that on the basis of a two-country model (France and Germany – see appendix), reforms to improve the competitiveness of the French economy have positive effects in the short and long term on French GDP and in the short term on German GDP. The long-term effects on German GDP are negative, but very minor. The reverse is also true of structural reforms in Germany.

Thus, gains from the simultaneous implementation of reforms depend on their nature and the macroeconomic context but are generally positive, even when the main effect arises from an improvement in competitiveness.

### Coordination of structural reforms and economic policies

In order to evaluate the impact of these reforms on the output gap, and therefore on the required fiscal adjustment, their effect on real growth must be considered.

- Reforms to the goods and services market generally have short-term positive effects on GDP, through a rapid reduction in markups and prices.

- Labour market reforms can have a negative short-term effect on activity: particularly reforms that reduce employment protection, unlike active labour market policies.

A scenario in which real growth is unaffected by the reforms would see the output gap widen, as potential growth increases, potentially justifying a reaction from other economic policy instruments. According to the Banque de France study referred to above and in the appendix, the combination of a fiscal stimulus in Germany (which would have a significant spillover effect on France) and structural reforms in France would substantially increase GDP in both countries, while improving the overall sustainability of public finances in the area.

## Conclusion

The crisis highlighted the deficiencies of the European Economic and Monetary Union.

Much has been achieved since: the creation of a crisis management mechanism (the European Stability Mechanism – ESM), the implementation of a Banking Union, and a plan for a Capital Markets Union particularly with the launch of the European investment plan (the Juncker plan). However, the euro area does not have an effective mechanism to define and implement a collective economic strategy. Historically, the absence of such a strategy has been costly in terms of welfare. We estimate that for the 2011-2013 period, characterised by major financial turbulence and an opening of the output gap, the deficiencies in both fiscal and structural economic policy coordination cost between two and three percentage points of GDP in the euro area as a whole, without counting the direct cost of the crisis measured by the rescue programmes. Currently, lively debates on the use of fiscal leeway for those countries that have it and the acceleration of structural reforms in countries that struggle with a problem of competitiveness appear to make the case for better economic coordination in Europe to bring more growth and employment.



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## Appendix

# Spillover effects of fiscal and structural policies

This study simulates and analyses the international propagation effects of a fiscal stimulus and of structural reforms on the goods and services markets using a DSGE<sup>1</sup> model calibrated for France and Germany. Preliminary results suggest that structural reforms undertaken in France would have relatively minor spillover effects on Germany but that they would contribute to evening out the balance of trade between the two countries. A temporary fiscal stimulus in Germany would have visible effects on the French economy and would help to ease the deflationary impacts of French structural reforms on the euro area. Because of the relatively minor negative effects on competitiveness between the two countries in comparison with the expected benefits, a situation in which both countries had put in place structural reforms – as Germany did in the 2000s – would have been desirable for the growth of each country.

### The model's central assumptions

The model represents an economy of two countries joined in monetary union. The two countries exchange goods and financial securities, and trade goods with the rest of the world. The model incorporates a stylised representation of household heterogeneity in terms of qualifications, wages, and access to financial markets. The productive sector is characterised by the presence of short-term price rigidities and imperfect competition that allow businesses to apply a markup on their production costs.

### Transmission channels between the countries

The policies introduced in one country affect the other through trade and financial markets. We identified five main transmission channels:

- substitution/price competitiveness: goods produced in one country compete with the goods produced in the other country;
- income: production costs in one country impact household purchasing power in respect of imported goods in the other country;
- demand for imported goods: the household income in one country determines the demand for goods imported from the other country;
- monetary policy: inflation affects the reaction of the nominal interest rate applied in both countries;
- financial wealth: an increase in value added in one country results in positive wealth effects for the more affluent households in the other country through cross-border financial interests.

### Envisaged policies

We considered six scenarios and simulated them independently. Five involve the implementation of structural reforms in France. The sixth scenario involves a fiscal stimulus in Germany. The shocks

NB: Appendix written by Antoine Devulder.

<sup>1</sup> Dynamic Stochastic General Equilibrium model.

envisaged are: (i) an increase in multifactor productivity (economic simplification, training, infrastructures); (ii) a reduction in the markup on the price of goods for sale in the domestic market (greater competition); (iii) an increase in businesses' wage bargaining power; (iv) a reduction in the minimum wage; (v) a reduction in unemployment benefits; and (vi) a temporary increase in German public consumption. We also simulated the effect of the simultaneous implementation of the above-mentioned structural reforms in France and Germany.

### Main effects of the simulated policies

The short and long-term effects obtained as part of the preliminary simulations are presented in the following tables for each of the model's main variables (GDP, France's public fiscal balance, the balance of trade between the two countries and

the aggregate inflation of the French-German monetary union).

Based on these simulations, the structural reforms under review give a significant boost to GDP and improve the long-term position of French public finances. Despite contrasting redistributive effects, the reforms also have positive short-term aggregate effects on activity: due to agents' expectations, investment and employment surge immediately. Of course, the reforms impacting the labour market (wage bargaining, minimum wage and unemployment benefits) put pressure on real wages and therefore on the consumption of low-skilled households. By contrast, all the measures improve business profitability and positively impact the more affluent households in both countries. This channel also allows German households to benefit from a positive financial wealth effect, leading to a short-term improvement (although limited) in GDP. In the longer term, the relative deterioration in German

#### TA1 Unilateral implementation of structural reforms and fiscal stimulus

	GDP – France		GDP – Germany		Public fiscal balance – France		France-Germany balance of trade <sup>a)</sup>		Aggregate inflation – monetary union
	Short term	Long term	Short term	Long term	Short term	Long term	Short term	Long term	Short term
Productivity – France	++	+++	+ε	-ε	-	++	++	++	--
Markup – France	+	++	+ε	-ε	+	++	-	+	+ε
Wage bargaining – France	+	++	+ε	-ε	-	+	+	++	-
Minimum wage – France	+	++	+ε	-ε	-	+	+	++	-
Unemployment benefit – France	+	++	+ε	-ε	+	++	++	++	--
Public spending – Germany	+	0	++	0	+	0	++	0	++

a) A + (-) sign corresponds to an improvement (deterioration) in the French balance of trade with regard to Germany.

Source: Author's calculations.

#### TA2 Simultaneous implementation of structural reforms and fiscal stimulus

	GDP – France		GDP – Germany		Public fiscal balance – France		France-Germany balance of trade <sup>a)</sup>		Aggregate inflation – monetary union
	Short term	Long term	Short term	Long term	Short term	Long term	Short term	Long term	Short term
Productivity	++	+++	++	++	-	++	-	--	--
Markup	+	++	+	++	+	++	-	--	-ε
Wage bargaining	+	++	+	++	-	+	-	--	-
Unemployment benefit	+	++	+	++	+	++	-ε	-	--

a) A + (-) sign corresponds to an improvement (deterioration) in the French balance of trade with regard to Germany.

Source: Author's calculations.

price competitiveness leads to the balance of trade evening out in France's favour. The reduction in German exports to France and the increase in the proportion of French products in final demand in Germany explain the slightly negative effect on German GDP over this time frame. The simulation of the scenario of a temporary fiscal stimulus in Germany showed quite significant spillover effects on France at the moment of the shock. The structural reforms that were considered are deflationary in the short term for the monetary union as a whole, although the deflation was moderate compared with the real effects obtained.<sup>2</sup> In contrast, a fiscal stimulus in Germany would lead to a marked increase in aggregate inflation. These results suggest that a coordinated policy at the monetary union level, combining structural reforms in France with fiscal expansion in Germany, would soften the deflationary effects of the structural reforms.

It could benefit both economies in the short term, at the expense of a very limited reduction in German activity in the longer term. Lastly, the simulation of the simultaneous implementation in France and in Germany of the structural reforms that were considered shows substantial short and long-term gains for both countries. This result is consistent with the modest negative spillover effects found in the case of unilaterally implemented reforms. The situation in which France would implement some of these reforms, while Germany had already done so previously (notably with the Hartz reforms), would thereby be favourable in terms of GDP for both countries as the negative effects on competitiveness are largely offset by the expected benefits. Nevertheless, these simulations demonstrate that these reforms would not be enough to bridge the trade surplus resulting from the German reforms.

<sup>2</sup> In all cases, this involves overall aggregate inflation for France and Germany only; the impact on inflation in the euro area of 19 countries would be less significant.