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Cross-Country Spillover Effects and Fiscal Policy Coordination in EMU

Abstract:

This paper discusses the rationale for coordination of fiscal policies in EMU, focussing on cross-country fiscal spillover effects. It also offers a classification of different types of coordination mechanisms and assesses how the current EU framework for fiscal coordination is designed to address the spillovers. The paper argues that while the existence of fiscal spillovers in principle calls for the coordination of national fiscal policies, uncertainty about the functioning of such effects as well as political economy considerations make the design of effective policy coordination a very difficult task.

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Table of Contents

1 Introduction

The issue of fiscal policy coordination has been a near-constant subject of discussion since the creation of the Economic and Monetary Union (EMU) – and even before it. As early as 1989, the Delors report made explicit reference to it. It was emphasised that the single market, by strengthening economic interdependence between member states, would amplify the cross-border effects of developments originating in each member country. "It will therefore, necessitate a more effective coordination of policy between separate national authorities."[1]

As will be illustrated later in greater detail, in the Maastricht Treaty signed in 1992 the notion of economic policy coordination, and in particular of fiscal policy, relies on a framework that is based on rules, the Stability and Growth Pact (SGP). Rules are expected to ensure ex-ante that prudent fiscal policy, spelled out through specific numerical targets, acts the common principle guiding fiscal policy in each member state. In other words, the SGP can be seen as a form of coordination that implies a commitment towards certain policy outcomes while national governments remain sovereign in the choice of the tools and specific actions to deliver them. Despite the violation of the SGP in 2004-05 by Germany and France, the framework has remained unchanged until 2010.

The debate about policy coordination resumed in earnest after the outbreak of the crisis in 2010 when the flaws of the existing system became clear. As response, the governance framework was reinforced with the objective of enhancing economic governance and fiscal coordination in the EMU. This resulted in a new SGP. In reality, the reform of the governance system addressed a wider set of matters, including the regulation of banks, and yielded the creation of new institutions, most notably the Single Supervisory Mechanism (SSM) and the Single Resolution Mechanisms (SRM), key pillars of the Banking Union, as well as the European Stability Mechanism (ESM) to deal with distressed countries. On the fiscal side, the fundamental idea was to reinforce the existing rule-system by developing stronger surveillance mechanisms on a country-by-country basis and by designing a more effective enforcement of surveillance through incentives as well as a wider spectrum of semi-automatic sanctions. Five years after the introduction of the reformed fiscal governance framework, the assessment of its ability to deliver is far from being unanimously positive.

The fundamental question, which may erroneously be considered rhetoric, is whether increased policy coordination was appropriate and what one should expect from it. From an economic

[1] Delors Committee report (1989), Report on economic and monetary union in the European Community, Committee for the Study of Economic and Monetary Union.

perspective, to answer this question requires addressing the issue of what the rationale for economic policy coordination is. Economic literature suggests that the justification for fiscal policy coordination should be sought in the existence of economic cross-country spillover effects. Exogenous shocks, either induced by policy choices or driven by external factors, in one country can generate effects that spill over into other countries through multiple economic channels fed by economic interdependence. Indeed a fiscal impulse in one country may impact output and prices in another country through imports, relative prices, the interest rates channel and other financial linkages. Such linkages are particularly strong and relevant in the context of a monetary union, where both the monetary policy and the exchange rate are common and reflect average conditions and integration is deep. In such a context a cooperative approach, in the form of economic policy coordination, while on the one hand, reduces the discretionary use of fiscal policy by national governments, on the other hand should increase stability across the union. Hence, strengthening the framework of fiscal rules and their enforcement seems to be fully consistent with the rationale for coordination. It should also be recalled that in the context of the monetary union, fiscal rules were conceived as a crucial tool for making sure that fiscal instability in one country does not jeopardise the stability of other countries and the common monetary policy would be adequate for all member states.

As will be argued in this paper, however, in the real world various shocks occur and a lot of uncertainty exists about the functioning of cross-country spillover effects. It is difficult to establish ex-ante the nature of particular spillovers – whether it is a price or output spillover, which transmission channels are at work and how the shock will impact the receiving country. Such uncertainty makes it difficult to argue that policy coordination always lead to a better outcome even if in theory the existence of spillover effects calls for policy intervention.

From this perspective, this paper attempts to present an encompassing review of the literature and the issues at stakes related to fiscal policy coordination and cross-country spillover effects in EMU. In this context, the issue of economy policy coordination and spillover effects is not independent of the more institutional debate about whether national sovereignty on budgetary policy should be relinquished in favour of a federal EMU government (fiscal union) to better deal with the problem of spillovers or, at least, whether some common resources should be centralised for specific stabilisation purposes.[2]

[2] Such as, for example, a common European unemployment benefit scheme, which the "Five Presidents" report refers to.

The paper is organised as follows. Section 2 provides a working definition of spillovers and identifies key transmission channels. Section 3 looks into the spillovers in a theoretical framework to illustrate the rationale for policy coordination. Section 4 is devoted to a review of the literature on the sign and magnitude of fiscal spillover. Section 5 offers an appraisal of different forms of coordination and their classification. Section 6 provides an overview of the evolution of the EMU governance system and its recent changes, emphasising spillover and policy coordination. The final section concludes.

2 Fiscal spillovers and transmission channels: Some working definitions

We define *fiscal spillover* as an influence of fiscal policy measures undertaken in an individual country (source country) on another (recipient country) country. By *fiscal policy* we mean government policies that influence aggregate economic outcomes - in particular private borrowing and savings, consumption, labour supply and investment - via taxes or government spending.

This definition of fiscal policy includes policies that are sometimes referred to as structural policies, such as a pension reform that increases the labour supply by changing the eligibility age for old-age pensions. Arguably, such a reform is in the realm of fiscal policy in that it is likely to change the effective taxation of labour income at least for individuals close to the retirement age. However, it is sometime useful to distinguish between *budgetary policy* and *structural fiscal policy*. By budgetary policy actions, we mean changes in the level of spending or taxation that influence the government deficit and aggregate demand, without necessarily affecting tax or expenditure structures (revenue shares of different taxes or expenditure shares of different expenditure categories). By structural fiscal policy measures we mean changes in the structure of government spending or taxation that influence the incentives for labour supply, saving or investment, without necessarily having an immediate impact on government deficit and aggregate demand.

A fiscal policy change in one country may influence other countries via multiple channels, which are treated extensively in the economic literature.[3] The main channels discussed in the literature are the *demand channel* (also referred to as the trade channel), the *competitiveness channel* (also referred to as the terms of trade channel) and the *financial markets channel*.

[3] See European Commission (2006) for a detailed discussion.

The demand channel is the one that has received the most attention. By affecting domestic demand, fiscal policy actions are also likely to affect the demand for imported goods, which registers as a change in export demand in countries that are trade partners. This channel is usually related to budgetary policies. For instance, because of the demand channel, a fiscal stimulus in one country may stimulate aggregate demand in other countries.

A fiscal stimulus is also like to affect the terms of trade by increasing inflation in the source country, which is an example of the competitiveness channel. The competitiveness channel may be relevant also in the case of structural fiscal policies. In fact, with distortionary taxation, all fiscal policy decisions are likely to affect relative prices and hence also the terms of trade to some extent (Ferrero, 2009). Fiscal policies may also directly target the terms of trade. That is the case, in particular, with a so- called fiscal devaluation, i.e. a policy that consists of increasing VAT and reducing payroll taxes. Other structural fiscal policies, such as those aiming to increase labour supply, may also have spillover effects via the competitiveness channel.

The financial market channel may be related to several mechanisms. Interest rates in different market segments and the policy rates are the typical transmission mechanisms. For one thing, excessive government borrowing in an individual country can increase the risk-premium of government debt in other member countries of a monetary union. This may happen because of a lack of commitment to a no bail-out rule, which implies that member countries are to some extent liable for the sovereign debt of all other member countries. Even if the no bail-out rule is credible, risk premia may increase in other countries because of a risk of financial contagion. In particular, increased sovereign default risk may spill over to other countries via weakened financial intermediation. Especially when fiscal expansion is debt-financed and public debt is already high, substantial financial market spillovers can thus emerge. To some extent at least, these concerns apply to private debt as well. Excessive private debts have often become part of public debt during a financial crisis.

Different forms of financial market integration are also a source of cross-country spillover effects. In the euro area, where financial integration has resulted in cross-border banking exposure, foreign claims of the banks may work as transmission channels of fiscal policy shocks and in some cases even as amplifiers of shocks.

Another issue is the possibility of self-fulfilling government debt crises and the role of the central bank (in particular, the ECB) as a lender of last resort in government bond markets. See De Grauwe (2011) for a detailed discussion on this issue. Related to this, Aguiar et al. (2015) emphasise that

there is a fiscal externality in the sense that a (small) member country ignores the impact of its borrowing decisions on inflation expectations via the credibility of the central bank's inflation target.

3 The rationale for fiscal policy coordination

3.1 General framework

The relevance of policy coordination and centralisation of competences is often examined from an institutional point of view. This usually considers whether a policy tool should be centralised or left at the local level according to two criteria: the spillover generated by political decisions and citizens' preferences. Hence, the literature on fiscal federalism (see Oates, 1972, Musgrave, 1983) is useful to frame the discussion on the economic merits and disadvantages of fiscal coordination, because the arguments for (de)centralisation and coordination are to some extent analogous. As pointed out by Alesina and Wacziarg (1998), in the end the optimal degree of centralisation of a specific policy competence involves trading off the size of the cross-border externalities generated by decentralised policy decisions and the heterogeneity of local preferences and constraints. The existence of large externalities from decentralised policy actions provides a rationale for centralising the decision-making of a certain policy area.

Another important consideration relates to the prominent role that fiscal policy has come to play in the monetary union. The literature on the optimum currency area (OCA), which paid close attention to the stabilisation of asymmetric demand shocks in a currency union (Mundell, 1961 and Kenen, 1969), argued that once the monetary and exchange rate policy was no longer handled domestically, negative asymmetric shocks could only be buffered through fiscal policy.

More generally, the rationale for fiscal coordination is anchored in the assumption that fiscal spillovers are economically important and hence better managed or coordinated centrally. The grounds for intervention, which in this case takes the form of fiscal cooperation, rests on the basic principles of welfare economics: neglecting the spillovers of fiscal policies may yield sub-optimal policy outcomes. Internalising the spillovers may require coordination of national fiscal policies.

3.2 Fiscal spillovers and efficiency: The role of market imperfections

It is important to realise, however, that the existence of a fiscal spillover by itself is not evidence of a market failure. That is, it may not be possible, via fiscal coordination or some other policy intervention, to provide a Pareto improvement, i.e. to make some people better off without making anyone worse off. Therefore, the existence of a fiscal spillover does not *automatically* provide an *efficiency* argument for fiscal coordination.[4]

This is because fiscal spillovers do not *directly* affect the welfare or productivity of individuals in other countries. Hence, they are not 'technological' externalities, such as pollution, for instance. Instead, they work through market mechanisms and should therefore rather been seen as 'pecuniary externalities'. While the presence of technological externalities generally means that market equilibrium is inefficient, pecuniary externalities by themselves are not a source of inefficiency (see e.g. Greenwald and Stiglitz, 1986). Indeed, in a market economy, pecuniary externalities abound.

Roughly speaking, pecuniary externalities do not lead to inefficiencies if markets are competitive and complete. In such a situation, the so-called first welfare theorem in economics guarantees that pecuniary externalities cancel one another out in the sense that one person's loss is always another's gain (see e.g. Mas-Colell et al. 1995, chapter 16). In that case, they can be ignored from the point of view of economic efficiency. This also applies to fiscal spillovers. However, in the case of spillovers from national fiscal policies, we also need to take into consideration that the policy-makers may be able to influence international market prices and that they may face relevant policy restrictions.

In a recent paper, Korinek (2015) characterises the situations in which the international spillovers from national economic policies are Pareto efficient.[5] Loosely speaking, this is the case if: i) national policy-makers act as price-takers, ii) they have enough policy instruments to control external transactions and iii) there are no imperfections in international markets. On the other hand, when some of these conditions are violated, spillovers from national economic policies may result in an inefficient outcome and call for international policy coordination.

Korinek (2015) also provides some general guidelines for how policy cooperation can improve welfare in such cases. As for the first condition, policy cooperation should ensure, for instance, that countries do not try to manipulate their terms-of-trade in order to correct for some domestic

[4] By "efficiency" we refer here to "Pareto efficiency". An outcome is Pareto efficient if it is not possible to make anyone better off without making some person worse off. We discuss distributional considerations in the following subsection.

[5] For an earlier discussion of the efficiency implications of fiscal spillovers that is actually similar in spirit to Korinek (2015), see Buiter and Kletzer (1990).

distortions. An example relating to the second condition is that if a country experiences relevant externalities from capital inflows but has no instrument to control them, other countries should control their capital outflows.

The third condition relates closely to the first welfare theorem. In the presence of market imperfections, the first welfare theorem does not hold and the market outcome is not Pareto efficient. In such a situation, pecuniary externalities can have first-order welfare effects (see e.g. Greenwald and Stiglitz, 1986, and Loong and Zeckhouser, 1982). [6] It follows that fiscal spillovers may be very relevant from the point of view of efficiency, even if the first two conditions above are satisfied.[7]

To take a concrete, and much-discussed example (see e.g. De Grauwe, 2009), consider a situation where the aggregate output is much below its potential in several member countries of a monetary union and the common monetary policy is constrained by the zero lower bound (ZLB). Because of the output gaps and the ZLB, which rules out increasing aggregate demand by monetary policy, there is arguably a strong case for fiscal stimulus. When one country follows an expansionary fiscal policy, this increases economic activity (reduces the output gap) also in other countries (via the demand channel). While the benefits of a stimulus programme in the source country partially spill over to other countries, its costs (increased public debt) are borne by the source country alone. In this case, the relevant market imperfections relate to wage rigidities and the ZLB and possibly some other frictions, which prevent prices from adjusting and result in high unemployment and a drop in aggregate output below its potential in certain circumstances.

Of course, there are many other types of market imperfections that may imply that fiscal spillovers are a source of inefficiency. We discuss some of them in the next section. It should be recognised, however, that even though markets are obviously imperfect in many ways, it is not always clear how to improve the market outcome. Moreover, the relevance of a given market imperfection may well vary over time.

3.3 Fiscal spillovers and coordination: A redistribution argument

The rationale for fiscal policy coordination may also relate to *distributional* concerns or goals, instead of efficiency. Even if a given fiscal spillover is not particularly relevant for efficiency, it

[6] In the presence of market imperfections, the distinction between pecuniary and technological externalities becomes somewhat blurred precisely because pecuniary externalities may then also have first-order welfare effects.
[7] Of course, the first-best policy would be to eliminate the imperfections that lead to inefficiencies in the first place. Arguably, however, some of the key imperfections are hard to remove.

may of course have substantial distributional implications. The effects may relate to the distribution of average welfare across individuals of different nationality or the distribution of welfare across citizens within individual countries. Arguably, both budgetary and structural fiscal policies can often have cross-border distributional effects via changes in market prices.

While distributional arguments are obviously important in many policy areas, it seems however that they are seldom invoked in the case of fiscal policy coordination. One reason may be that sovereign nations have little reason to agree on policies that would lower the welfare of their own citizens. On the other hand, international fiscal policy coordination is rarely likely to be the most efficient way to shape the distribution of welfare across individuals.

4 Quantifying spillover effects: A survey of the literature

As discussed above, from a theoretical point of view, the case for coordination rests on the existence of fiscal policy spillovers on cross-border output together with some type of market imperfections. In reality, it is crucial to identify the nature, the sign and the magnitude of the cross-border spillover associated with fiscal policy, paying attention to the state of the economy and the underlying market frictions.

However, quantifying cross-border spillovers in a robust fashion remains a key practical challenge and existing studies do not provide an unambiguous answer on the matter. This section aims at breaking down the literature into its relevant pieces in order to identify cases in which spillovers are sizeable or not. In particular, we concentrate on the recent crisis and the consequences of the ZLB, as we examine the three main channels discussed in section 2.

4.1 Demand channel

Empirical studies

The importance of the spillover effects from fiscal policy shocks in the demand channel depends, first of all, on how the private sector reacts to changes in domestic (budgetary) fiscal policy. The way fiscal shocks play out is closely related to whether the so-called Keynesian multiplier is sufficiently large as to provide a direct boost to aggregate demand. In the case of Ricardian equivalence, spending shocks are accompanied by anticipations of future tax hikes which lead forward-looking agents to save the additional income they receive. In other words, changes in

government savings (e.g. temporary tax cuts or spending expansion) should be exactly offset by changes in private savings.[8] In fact, it is even possible that a contractionary fiscal policy has expansionary effects, and vice versa. The argument is that a fiscal contraction can be interpreted by the private sector as a signal that government spending will decrease permanently; hence interest rates will be pulled down and households will raise current and future consumption. Several papers have found empirical evidence in support of this hypothesis; see e.g. Giavazzi and Pagano (1990). However, Guajardo et al. (2011) show that conventional measures of the fiscal policy stance used in the literature appear to be biased towards overstating expansionary effects.

Estimating the magnitude of the associated trade spillover effects is further complicated by the fact that it requires following international linkages. One strand of the literature has focused on estimating how fiscal policy shocks influence the current account (see Goujard 2013, for a brief literature review) in order to estimate the size and sign of the trade channel. Part of this literature relies on so-called vector autoregression (VAR) models. Overall results are mixed, but the cyclically-adjusted budget balance is generally not associated with major changes in the current account, suggesting that spillover effects via the trade channel are modest (Beetsma and Giuliodori, 2011. However, dealing with endogeneity problems is often an issue with VAR models. An alternative method is the so-called narrative approach, which uses historical documents to isolate fiscal policy shocks that can be considered truly exogenous to economic conditions. Following this approach and data from 10 EU member states, Bluedorn and Leigh (2011) find that the effect of a 1% of GDP fiscal consolidation on the current account-to-GDP ratio within two years is 1.3 percentage points. Other studies have found similar results (again, see Goujard, 2013, for references).

Beetsma, Giuliodori, and Klaassen (2006) use a VAR model together with trade equations in the EU. Their findings suggest that output spillovers from a positive public spending shock of 1% of GDP in Germany to the rest of the EU is about 0.23% of GDP over two years. For a net tax cut, the corresponding effect is 0.06% of GDP. Hebous and Zimmermann (2013) estimate a global VAR and find that the impact of a euro-area wide fiscal shock on output is larger than a domestic shock of a similar size. Goujard (2013) finds comparable results among a group of OECD countries, and

[8] It should be noted that the composition of the fiscal policy shock should matter in this context. For instance, there is no reason for even fully forward-looking 'Ricardian' agents to adjust private consumption strongly following temporary changes in public investments.

reports that spillovers across members of a currency union are larger than across those under floating exchange rates.

Several recent papers consider the possibility that the size of the fiscal spillover effect may depend on economic circumstances. Auerbach and Gorodnichenko (2013) construct fiscal policy shocks by computing real-time, one-period-ahead forecast errors for government spending in each country from the OECD's "Outlook and Projections" database and then aggregate these shocks across source countries using bilateral trade weights. They find that the size of fiscal policy spillovers, in terms of how much they affect output in other countries, varies significantly over the business cycle. The spillovers are substantial when both the source country (the country where the fiscal policy shock takes place) and the recipient country are in a recession. During expansions, by contrast, the output spillovers are close to zero.

Other recent papers have found similar results during times of fiscal consolidation. Canova et al. (2013) consider a structural panel VAR model where trade, financial, fiscal and real variables are introduced for four countries of the euro area periphery, and Germany, France and the Netherlands in the core. Focusing on the effect that fiscal consolidation in the periphery on the core and among peripheral economies, they find that prior to 2008 externalities from fiscal policies tended to be minor and quite heterogeneous. After 2008, however, the (negative) effect of consolidation becomes much larger.

Looking ahead, it is legitimate to ask whether further integration efforts could affect the size of externalities. In principle, economic, monetary and financial integration should, on the one hand, improve conditions (e.g. economic convergence and synchronisation of the cycle across countries) for setting the single monetary policy, while on the other hand, it is likely to increase the channels for the transmission of shocks and potentially the uncertainty about the sign and size of spillovers, as they could reinforce each other or cancel each other out.

Simulation models

The demand channel has also been analysed in a number of a quantitative simulation models, which tend to provide mixed results. Gros and Hobza (2001) offer a review of the results from four major macroeconomic models showings that the cross-country spillover effects of fiscal policy are indeed of uncertain sign and magnitude, depending on the model used. Assuming a 1% government spending shock in Germany, the output effect is found to be generally positive for small open economies with strong trade links with Germany (around 0.02% of GDP in Austria, Belgium and

the Netherlands), while the effect appears to be negative (from -0.02 to 0.1 of GDP) in larger member states or small economies with fewer trade linkages with Germany.

More recently Cwik and Wieland (2011) have considered five versions of a structural DSGE model calibrated for the eurozone in order to analyse the likely effect of the 2008-09 spending-based EU stimulus plan. Their results suggest that cross-border spillovers from expansion in the eurozone are negligible because direct demand effects are cancelled out with the indirect effect of a euro appreciation.[9]

Corsetti, Meier and Muller (2010) consider a debt-financed increase in government spending leading to higher future taxes and reduction in spending over time. Anticipations of spending reversal is found to reinforce both the impact of the domestic positive fiscal shock, but also the positive cross-border spillovers through its impact on global long-term interest rates. They also argue that coordinated temporary fiscal expansion are thus most effective when coupled with a commitment to a consolidation plan involving some spending cuts in the future.

Benassy-Quere et al. (2006) show that a spending expansion or tax cut in a monetary union produce positive output effects abroad as long as the latter is followed by a loosening of the monetary policy (except if tax cuts have very large supply-side effects). If the central bank does not accommodate the shock, the spillovers of a fiscal expansion are generally negative.

Overall, model-based studies suggest that fiscal spillovers are weak, and sometimes even of uncertain sign. However, earlier DSGE analyses usually do not allow the initial state of the economy to vary in a substantial way. As a result, they are not well-suited for analysing how fiscal policy works in recession. Related to this, some of the most recent model-based studies have focused on the ZLB (see e.g. Erceg and Lindé, 2010, Farhi and Werner, 2012 and in't Veld, 2013). Typically, taking the ZLB into account makes the fiscal spillover effects (via the demand channel) much more relevant. This is partly because monetary policy cannot react to fiscal policy shocks.

4.2 The competitiveness channel

[9] In particular, they find that the spillover effects from a 1% GDP expansion in Germany would only raise France's GDP by 0.04%. As pointed out by Ivanova and Weber (2011), the fact that Bew-Keynesian models do not support the existence of Keynesian multiplier effects can be attributed to the forward-looking behaviour of economic agents who anticipate higher tax and interest rates in the future and thus reduce their consumption and investment. In fact, one of their five models ignores these forward-looking assumptions and finds a multiplier larger than one.

The models that are used to analyse the demand channel also typically capture the competitiveness channel, at least via endogenous real exchange rates. Since changes in terms of trade are part of the general equilibrium effects of policy changes, it is hard to disentangle the importance of changes in the terms of trade from the direct demand effects. This also applies to empirical analysis.

As mentioned above, fiscal policies may also affect the terms of trade directly via e.g. a fiscal devaluation or related policies. These policies are usually analysed using open economy or multi-country general-equilibrium models. Koske (2013) identifies and discusses many of the related papers. A crucial aspect in these analyses relates to labour market institutions. By and large, these studies suggest that a fiscal devaluation can be used to boost exports and improve the current account of the country undertaking it. Hence, such a policy clearly has spillover effects on other countries. However, the model-based analyses suggest that the effects can be quite short-lived. The effects of a fiscal devaluation depend to a large extent on how nominal wages adjust over time (see European Commission, 2013). De Mooij and Keen (2012) have examined fiscal devaluations and related policies empirically. Their results are in line with the view that a fiscal devaluation improves the current account balance.

4.3 Financial markets channel

Faini (2006) empirically studies the relationship between fiscal policy and interest rates in the EMU. He finds that the creation of the EMU significantly increased fiscal policy spillovers across the union through changes in the interest rates. In particular, expansion in one EMU member is found to have a significant effect on interest rates, not only by increasing its spread relative to Germany, but also by raising the overall interest rate level in the EMU.

While the possibility of financial contagion has been a major concern during the euro crisis, there appears to be little research quantifying the importance of this channel. One exception is Glover and Richards-Shubik (2015). They estimate a network model of credit risk to measure market expectations of the potential spillovers from a sovereign default using data on the European sovereign debt market from 2005 to 2011.They find the related spillover effects to be relatively small.

5 Economic policy coordination

5.1 Framework for policy coordination

The theory of coordination based on the work of Hamada (1974) states that cross-border policy externalities lead to Pareto inefficiencies in the absence of coordination. In particular, without any form of cross-country commitment, policies that produce positive spillovers will be under-supplied and those with negative ones over-supplied. In the context of the EMU, Begg et al. (2004) define policy coordination as "supranational rules or norms agreed by all Member States that leave primary responsibility for the policy area with national authorities, but set limits on their discretion".

The degree to which policy coordination is binding depends on the underlying level of policy centralisation – i.e. its supranational character. Within EMU, coordination agreements range from soft mechanisms essentially involving peer pressure or shaming to stronger ones that are enshrined in treaties. Soft forms of cooperation are not coercive and take the form of guidelines or recommendations such as the Country-Specific Recommendations issued by the Council in the wake of the EU Semester. Harder forms of cooperation such as the Excessive Deficit Procedure (EDP) or the Macroeconomic Imbalance Procedure (MIP) imply a top-down approach to policy formulation. Rules are defined and imposed at the supranational level but implemented by national fiscal authorities. Failure to implement the rules can lead to disciplinary procedures from the supranational entity.

Coordination agreements can be made ex ante and ex post. Ex-ante coordination is based upon formal arrangements (a treaty, pact, law) that are recognised by all the parties involved. They include certain policy objectives whose violation can lead to launching a procedure, and ultimately some sanction. Overall the EU economic governance framework is mostly rules-based, with fiscal discipline (SGP) and the monitoring of macroeconomic imbalances (MIP) being at the centre of the attention. They are based on the assumption that compliance with rules, enshrined in a supranational agreement, limits the risk of externalities emanating from weak fiscal and unbalanced macroeconomic positions. Of course, ex-ante rules can only address a limited number of policy objectives. In the EU governance framework, they mostly serve to prevent certain countries from maintaining a structural budget deficits bias. Ex-post coordination is ad hoc and discretionary and it depends on circumstances and a set of contingencies. In the case of the EU, since fiscal rules are asymmetric and only binding when budget deficits are too large, improving demand management

outcomes may require ex-post coordination. The Eurogroup and ECOFIN meetings are some of the most obvious platforms for ex-post economic policy coordination in the EU.

A strong and credible pre-commitment is a key factor in ensuring the success of cooperation. The main practical difference between ex-ante and ex-post mechanisms is precisely that ex-ante arrangements require a strong degree of pre-commitment (although it may not always be fully credible), whose enforcement should be guaranteed by the fact that any breach would be made public. However, the distinction between ex-ante and ex-post coordination is not always clear. For instance the SGP embodies both ex-ante and ex-post aspects. The target rules are an example of ex-ante coordination, but the corrective arm of the SGP is a form of ex-post coordination.

5.2 Desirability of and obstacles to cooperation

While economic theory tells us that the existence of externalities provides a theoretical rationale for coordination, assessing the scope for policy cooperation requires acknowledging that in practice economic welfare gains from coordination are to be traded off against a constellation of economic and political costs related to various practical aspects of policy coordination.

Fiscal policy coordination and monetary policy

A large literature has shown that policy coordination can have counterproductive outcomes when it is restricted to a subgroup of players – the national governments – and does not involve a major one like the ECB (see Beetsma et al., 2001 for a survey). Given the strong interactions between fiscal and monetary policies, cooperation among fiscal authorities can affect the dynamics of this interplay and impact macroeconomic management outcomes. Debrun (2000) and Beetsma and Bovenberg (1998) show that fiscal coordination increases the relative power of fiscal authorities vis-á-vis the central bank. This would increase the possibility of pressure on the ECB to monetise public debt and jeopardise the credibility of its price stability commitment. This means that cooperation among fiscal authorities may lead them to take advantage of their position, making rules-based cooperation (e.g. the SGP) desirable in order to avoid expansionary bias and time-inconsistency issues. Beetsma et al. (2001) find similar results and further point out that cooperation tends to be more counterproductive when shocks are synchronised because coordination efforts by fiscal authorities would trigger more aggressive reactions on the part of the ECB. In fact, the scope for cooperation should increase when shocks are negatively correlated because euro-area aggregates are only weakly affected. These results thus suggest that coordination in an OCA could actually be undesirable.

Political economy of cooperation

Political economy considerations have critical practical implications for policy-makers and can hinder the feasibility of policy coordination. One aspect that may complicate the scope for cooperation is that asymmetries in country size mean that most gains or losses for cooperation could accrue to small countries. Conversely, larger economies may have lower incentives to cooperate because broad cooperation would make a small difference to them (Ostry and Ghosh, 2013). Different country size and its effects on both incentives to cooperate and different bargaining power, combined with heterogeneous economic interconnectedness across countries, imply that certain countries will inevitably benefit more than others.

On the other hand, since politicians are chosen by their domestic constituencies, the political costs associated with coordination can be important, for instance when it implies tighter fiscal policy which is in most cases unpopular. The unprecedented number of governments that have fallen during the EU austerity period is only one example of the cost it may impose politically.[10] Since the costs are highly visible in the short run and their benefits tend to be more diffuse and materialise over the longer run, incentives for office-seeking politicians may be weakened despite probable welfare gains on aggregate. Of course, the argument can be used conversely, notably in times of crisis, during which governments may find it necessary to coordinate in order to protect some relevant constituencies.

Coordination under uncertainty

The mere idea that short-run political costs would reduce policy-makers' incentives to adopt the correct policy actions is at odds with the common wisdom that good economics makes for good politics. Indeed, expectations of good economic outcomes in the longer run may be rewarded in the short term. However, conducting good economic policy assumes perfect knowledge of the economic situation and of the relevant policy remedies, as well as costless coordination and policy implementation. In fact, a central impediment to cooperation is the high degree of uncertainty, which makes it more difficult, although not impossible, to enforce the 'right' economic policies.

Uncertainty entails at least two important orders of complexity to coordination. First, there tends to be a great number of unknowns about the state of the economies. A well-known illustration of the uncertainty over the economic situation is the impossibility to observe the actual output gap, a

[10] Of course, the counterfactual cannot be proved. So it may also be the case that those governments would have fallen even if they had made different choices.

variable on which structural balances rely for measuring countries' compliance with the fiscal compact. While it is widely acknowledged that taking the economic cycle into account in order prevent excessively pro-cyclical spending, output gap measurement poses severe methodological issues. Similarly, we have highlighted that disagreements remain over the size and sign of spillovers and multipliers, as well as on the transmission channels of shocks and policies responses. This issue is partly exacerbated by the fact that effects tend to greatly vary according to the status of the economy. Uncertainty about spillovers and coordination outcomes casts doubt about the ultimate economic outcomes and thus the case for policy coordination.

The second degree of uncertainty relates to the lack of common policy consensus providing guidance as to what is the appropriate policy reaction (e.g. expand or contract) to a certain shock or policy effect in EMU. Cooperation also requires member states to agree on the remedy, which can prove highly complex, especially when policy actions involve trade-offs between different policy objectives and spillovers of conflicting signs.

Ostry and Ghosh (2013) support this argument by stating that *disagreements* between policy-makers sometimes stem from the existence of uncertainty. For instance, during negotiations member states have an incentive to claim that the negative (positive) spillover they generate are smaller (larger) than what it really is, and recipient countries to exaggerate the negative externalities. It may therefore be impossible to reach a policy cooperation agreement (Ghosh and Masson, 1994).

From a practical point of view, the process of coordinating policies in a timely and effective manner is thus particularly complex. It requires swiftly processing a large amount of complex information and correctly interpreting its implications. Furthermore, since fiscal policy spillovers mostly relate to short-term policy actions (Issing, 2002), timing is key for coordination to be efficient.

All in all, coordination is less likely to occur when uncertainty about the state of the economy is high and gains from coordination come across as unclear.[11]

5.3 Trade-off between externalities?

An additional order of complexity is added when considering that trade-offs may occur among policy objectives if spillover effects run in different directions. Certain policy objectives will necessarily be perceived as more pressing at certain points of time than others, leading to tensions.

[11] It has been shown that under certain conditions, high uncertainty about the effects of policy coordination can in fact raise the welfare gains from coordination. See Ostry and Ghosh (2013) for a more in-depth analysis.

The experience of EMU has shown that EMU is particularly prone to such reversals. A comparison between 'normal' and 'crisis' provides a useful illustration of how this may happen.

During the first years of EMU, peripheral euro area members arguably benefited from lower interest rates, which reduced the cost of borrowing significantly in certain countries. However, since fiscal rules do not require member states to run a fiscal surplus, several member states have taken advantage of favourable economic conditions to keep expanding their fiscal policies. Overall, however, the fiscal stance may thus have been too expansionary, as there didn't seem to be significant negative externalities at the time. When the financial crisis first hit the world in 2008, EU member states coordinated a joint fiscal stimulus plan (EU recovery plan) in order to support the EU economy's recovery and to maximise the positive externality.

The tide turned as the sovereign debt crisis began to spread across the eurozone. To some extent a trade-off became visible between sustaining fiscal stimulus and limiting spillovers in financial markets and the banking system. In fact it is typically after countries have accumulated fiscal deficits to let stabilizers operate that ex-ante rules take over, and can force countries to adjust their deficits. This means that ex-ante rules implicitly prioritised financial market spillovers. Even though externalities from financial markets are also largely related to an underlying failure of the EMU architecture, this episode showed that conflicts can arise across policy objectives.[12]

While the debate about which objective to prioritise has been vivid, the rules in place at the time have led to fiscal consolidation in virtually all the countries at the same time. As noted by De Grauwe (2009), in terms of demand-side externalities, the SGP rules had an effect similar to pulling everyone in a "non-cooperative Nash equilibrium".

5.4 Coordination and the nature of the shocks

The nature of the initial shock that affects the EU economy is likely to impact the feasibility and perception of the desirability of coordination. In order to illustrate how the different aspects of coordination come into play, it is helpful to look at the cases of strictly asymmetric and symmetric shocks.

Symmetric shocks

In principle, during normal times, economic coordination following, say, a symmetric negative demand shock can be unnecessary because monetary policy should be able to provide a monetary

[12] It is important to highlight that, at that time, the ECB had not committed to "do whatever it takes" nor had the talks started about a banking union.

stimulus. If the shock is so large or prolonged however that monetary policy is not sufficient, since no rule triggers fiscal expansion, ex-post coordination should logically occur in order to make sure that a sufficient joint fiscal stimulus is provided. Hence, provided that borrowing costs are under control and that the demand shock is large enough so that the potential welfare gains are visible, it is likely that cooperation would be relatively straightforward. In fact, this is exactly what occurred via the EU recovery plans: member states agreed to provide a joint fiscal boost in early 2009 in order to sustain demand in EU economies.[13]

The case for coordination is reinforced when monetary policy transmission mechanisms are broken since it increases the size of positive spillovers through the demand channel. However, the moment at which the ZLB is reached may also coincide with the moment fiscal rules become binding. Thus, it may not be possible to reap the benefits from positive spillovers of a joint expansion at the ZLB. In fact, the crisis has shown that negative cross-border financial spillovers can be closely related to mounting sovereign debt and persistent fiscal deficits, and this is to some extent due to the architecture of EMU. Indeed, the need for strong fiscal rules is much less present in stand-alone countries that have their own national central bank. Therefore, even when shocks are essentially symmetric, coordination endeavours in the EMU face potentially conflicting priorities. The experience of the sovereign crisis taught us that sovereign risk premium can rapidly skyrocket, nearly pushing countries like Spain, Italy or Portugal out of the capital market, and forcing Greece to surrender almost all its sovereignty.

In both cases (ex-post expansion and rule-based contraction), coordination has been relatively straightforward during the recent crisis, but guided by different objectives and shocks of a different nature. However, they have been met with different levels of resentment from EU citizens. To some extent it is ironically the rule-based fiscal consolidation that carried the largest political cost in this specific case.

Asymmetric shocks

Coordination of the fiscal policy stance could also occur in cases of asymmetric shock, particularly because fiscal policy is the only tool available in that case. Let's suppose that countries in the monetary union are strongly integrated through the trade and financial channels, a negative asymmetric demand shock hits a subset of countries and their borrowing capacity is constrained. Under these conditions, from the perspective of the monetary union, it would make sense that

[13] Cameron (2012) argues, however, that some countries contributed significantly more to the plan than their relative economic weight would have suggested.

countries with fiscal space increase their spending in order to support the overall fiscal stance, especially at the ZLB.

Given the complexity to create ex-ante rules able to trigger appropriate policy coordination, cooperation should occur ex-post. We know that economic theory suggests that if externalities are significant, appropriate policy coordination will be welfare enhancing. However, it is not hard to understand that interests may be misaligned this time around, in particular if the country that has some fiscal space doesn't have a particular appetite for fiscal expansion, whether it because they prefer to rapidly re-pay their debt or do not believe that the fiscal multiplier is sufficiently large. Not only is it politically less tenable for a country to borrow (or repay its debt later) in order to stimulate other country economies, the outcome is also much more uncertain since it depends on the particular cross-country trade linkages. It is thus more unclear if such level of fine tuning can be achieved since it requires a very precise understanding of state of the economy and of the spillover mechanisms at work.

Overall, these simplified examples tried to illustrate that despite the sometimes obvious theoretical benefits from policy coordination, both in the wake of symmetric and asymmetric shocks, coordination tend to arise when the alternative is a catastrophic outcome or the benefits are obvious for most participants. During normal times, when the effect of spillovers are small the overall case for coordination tends to be weak because other factors tend to cancel out potential economic gains.

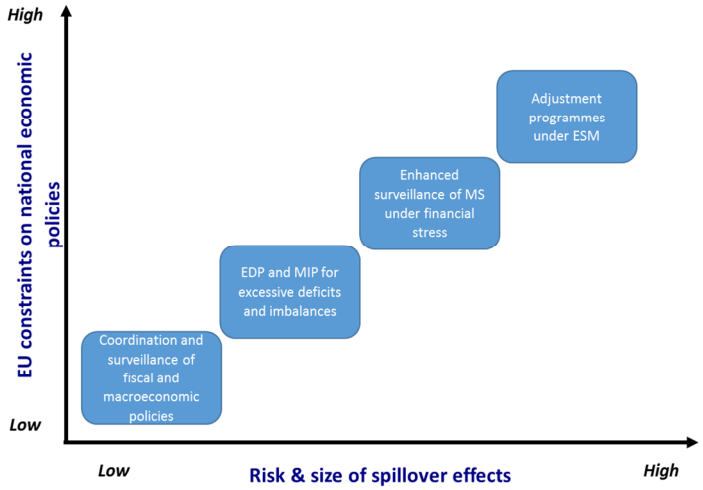
6 Current EMU framework for fiscal coordination and spillover effects

As mentioned in the introduction, the Maastricht Treaty defined the construction of a rule-based system of governance for EMU. This could be read as an attempt to replicate the logic of the EU single market regulation, which was seen as a successful example of depoliticised decision-making at a central level combined with economic integration and a level playing field across countries. The same rules, with targets and thresholds, are agreed and applied to all countries and mechanisms for corrections are made as automatic as possible. This reduces and potentially eliminates the need to take political decisions at the EU level, where no federal power exists and the only political power present is dispersed and affected by national interests and constituencies. Political decisions are left in the hands of the national governments, which have the political responsibility to choose tools and policies to meet the agreed targets and thresholds.

The sovereign debt crisis showed that the EMU system of governance was not as successful as the single market. Fiscal rules were not always implemented and overall failed to avoid fiscal profligacy, which was their main objective.[14] The absence of fiscal stability in some member states is an issue for the ECB, which has to set a single monetary policy for the union, but also because its effects go across national borders and are the source of negative spillovers. This idea dominates the changes introduced in the Stability and Growth Pact (SGP) after 2010. Indeed if one were to find a common thread in the institutional changes of the EMU economic governance in response to the crisis in the euro area, this would certainly be the attempt to strengthen EU supervision on economic matters. Broadly speaking, this implied that when the risk of large spillover effects increases, policy coordination implies that the country hit by the shock has to set a policy to reduce such risk and such policies are highly influenced by Brussels.

The various components of the new system of governance imply different degrees of EU intrusion in the definition of national economic policies according to different situations. Within the European Semester, the Council and the European Commission can play a central role in influencing the general principles of fiscal policies at national level, with the European Parliament or national parliaments playing a limited role, if any.

Figure 1. Coordination and spillovers under the EU system of governance



Source: Based on Alcidi et al. (2013).

[14] This should not be read as a statement that the euro area crisis had only fiscal origins. It was a financial crisis in nature, but there is little doubt that the fiscal position in most countries was not sufficiently strong to offer a bold response to the crisis.

Figure 1 considers the four existing procedures (the blue boxes) in the framework of the SGP and its changes introduced through the Six- and Two-Pack, namely macroeconomic adjustment programmes, enhanced surveillance of countries under financial difficulties, corrective actions for excessive defect and imbalances and coordination and surveillance of fiscal and macroeconomic policies. Each of them corresponds to different levels of obligations (measured along the vertical axes) that member states are or can be subject to emanating from the EU level. The degree of intrusion of the EU level is plotted against the risk that a country falls into a situation of (financial and economic) instability and hence that an idiosyncratic shock generates negative cross-country spillover effects on other countries or on EMU as whole. When moving towards the right in the diagram, the cost of a failure in coordination should be larger as the risk of large spillovers is higher. Overall the main message of this simple exercise is that EU constraints on national discretion increase with the risk of (larger) spillover effects. The rationale for this is that a larger EU role in setting policy in certain countries should lead to better capacity to deal with externalities and avoid large externalities. The underlying hypothesis is that "Brussels", namely the EU institutions in general, knows better than national government what policy response to put in place under those circumstance, at least from the perspective of the Union as whole. In other words, there is the belief that governments on the basis of the perception of the national interest may opt for polices which are not be desirable from the point of view of other member states and the union as whole. In extreme circumstances, like for countries under adjustment programme, this may raise serious issues in terms of democratic legitimacy.

Figure 1 also helps us to understand the limits of the rule-based system and the idea of de-politicising EU decisions presented in the introduction. This exercise suggests that when moving away from the axes' origin, the rule-based system is failing as the shock was not prevented and decisions of a political nature may become inevitable. Since coordination may require that decisions are taken in view of a better outcome at the EMU level and not necessarily at national level and such a trade-off may be particularly strong in the short run, coordination may be difficult and generate disagreement among member states.

In reaction to the crisis, the European approach was not to remove the fiscal rules that failed, but rather to strengthen them. If one excludes the European Recovery Plan in 2011, which is probably the only example of coordinated fiscal policy response to a symmetric shock (the global financial crisis), coordination of macro-fiscal policies has largely implied sharing more common rules, most of the time, stricter rules. Besides the question asked earlier of whether this was the appropriate response, the problem is that the duration of the crisis and depth of the recession are severely calling

into question the desirability and the benefits of such common rules. Rules are designed to prevent the emergence of the risk of instability /fiscal shocks – not to mitigate their effects. On the contrary, reinforcing them when the shock has occurred is likely to lead to a lower outcome, especially if they have a deflationary bias, e.g. EU fiscal rules. Such arguments have shifted the debate from sharing rules towards the creation of common tools to mitigate the effects of shocks, such as a European unemployment insurance scheme. This would suggest that while fiscal rules are necessary and possibly inevitable in the EMU set-up, it is clear that fiscal shocks can still occur and that the EMU needs also mechanisms to cope with the effects of shocks.

The creation of the European Financial Stability Facility (EFSF) first and then the European Stability Mechanism (ESM) represent deviations from this idea of having a rule-based system only in favour of a governance framework where some risk-sharing with common resources is developed. While sharing rules has been accepted, on the front of sharing public resources, compromises have been the result more often than outright success. Indeed, both the EFSF and the ESM are mechanisms designed to share risks, but not resources or losses. EFSF and ESM resources are meant to grant loans later to be repaid by the borrowers.

Sharing resources without a central fiscal authority in charge of taxation and redistribution remains unacceptable[15] to several member states, as the solution is perceived as a way to de facto transform EMU into a transfer Union.

Yet, it should be acknowledged that, on the one hand, it is unrealistic to believe that ex-ante coordination in the form of fiscal rules will prevent fiscal shocks from happening and spillover effects from materialising. On the other hand, ad-hoc ex-post coordination may prove to be difficult to achieve and very costly. The EU experience with the sovereign debt crisis, and more recently with the refugee crisis, proves that agreements for coordinated action are reached only when catastrophic scenarios risk imposing huge collective losses. This suggests that losses associated with shocks should possibly be dealt with in other ways. In practice, loss-sharing and insurance mechanisms with either a market or fiscal nature can be at work and they are currently being discussed in the framework of EMU governance. The project of a Capital Markets Union and CMU) to some extent the Banking Union (BU) (especially the single resolution mechanism and fund) have (among others) the objective of increasing private risk-sharing and the insurance mechanism. The proposal of a common unemployment insurance scheme (which has been advocated by many) is an example of fiscal risk-sharing. With reference to it, it should be possible

[15] Of course, this does not mean that having a central fiscal authority is well accepted.

to design a temporary unemployment scheme, funded by public money in good times and used in bad times, to help smooth the effect of asymmetric shocks.

7 Conclusion

This paper discusses the rationale for fiscal policy coordination in the EMU and assesses how the current framework for fiscal coordination in the EMU is supposed to work. The economic theory points to the existence of cross-country fiscal spillovers, together with market imperfections or frictions, as the main reason for coordinating national fiscal policies among the member countries. When spillover effects interact with market imperfections, policy coordination can improve (Pareto) efficiency. The rationale for fiscal policy coordination should be especially strong in a monetary union, where the economic interlinkages between member countries are relatively tight.

Current fiscal coordination in the EMU is largely based on ex ante, or rule-based, coordination mechanisms to limit the need for ex-post coordination which has proved to be very difficult. The design of effective ex ante policy coordination is a very difficult task, however. This is partly because spillover effects are likely to depend on the state of the economy and several transmission channels can be at work at the same time. A key lesson from the crisis is that the sign and the magnitude of the spillovers depend on a host of factors: the state of the economy (for instance, a weak fiscal position, high sovereign debt, weak banking sector, excessive credit levels, zero lower bound, etc.), the origin of the shock, where it is received and possibly the state of the economy of the EU as whole, as well as whether the shock is a financial shock or an output shock. It is impossible to have an ex-ante system that can account for each possible case. Moreover, the interaction between fiscal spillovers and the relevant market imperfections may be quite complicated. For these reasons, current coordination mechanisms are not always conducive of a superior outcome.

Ex post coordination may react to economic circumstances in a more flexible manner than ex-ante coordination. On the other hand, it can be a complex and costly process, also from a political point of view. This suggests that ex-post coordination is likely to fail unless gains from coordination are very large. The recent discussion about completing EMU with a fully-fledged banking union and capital market union but possibly with some fiscal capacity reflects the understanding that besides coordination, EMU should be endowed with private and fiscal insurance mechanisms to deal with the effects of shocks.

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