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The Decision Rules of the ECB: Lessons from the Euro Crisis

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The Decision Rules of the ECB: Lessons from the Euro Crisis

Normal Times Versus Crisis Times [1]

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Introduction

From August 2007 the world was struck by a full-blown systemic financial crisis, unprecedented in terms of financial losses and fiscal costs, in its geographical reach across mostly developed economies, in its speed and its globally synchronised nature. The sovereign debt crisis is not yet over and the aftershocks of the financial crisis are proving quite severe in several euro area countries. The ECB's Governing Council has been confronted with several difficult choices. How has its decision-making process stood up to the mutating financial crisis? How have the monetary policy framework and decision rules coped with such high pressures and exceptional uncertainty?

Our aim here is to explain the ECB's decision rules. Important changes in the way monetary policy decisions are taken in central banks have been observed in recent years: decisions are now generally taken by monetary policy committees and no longer by (single) governors.[2] Maier (2007) defines a monetary policy committee as "a group of people sharing information and taking a decision together, on the basis of the information reviewed (and revealed)". Each committee member is expected to gather economic and financial information, share it with other members and jointly assess the economic outlook before any monetary policy decision is taken. To function effectively, a committee needs a sound monetary policy framework (i.e., a monetary policy strategy and an operational framework), clear decision rules and a shared set of principles.

The ECB has a two-tier monetary policy committee structure, comprising two main decision-making bodies: the Governing Council and the Executive Board. The Governing Council's task is more complex than that of its counterparts in other regions. This is due to the uniqueness of the euro area: a single currency area within an economic and monetary union with a single (centralised) monetary policy operating in a decentralised structure of cooperation and coordination for fiscal and economic policies, for which national responsibility remains (e.g., the Stability and Growth Pact). A feature of the Governing Council's deliberations is that each individual committee member may have different preferences or hold heterogeneous views on the economic outlook and the functioning of the economy.[3] Since the beginning of the crisis in 2007, we have witnessed more frequent meetings and teleconferences among the members of the ECB's Executive Board and the Governing Council. This has allowed a regular exchange of information and a joint assessment of the evolution of the situation.

The ability of a monetary policy committee to process information and the quality of its decisions depend, in turn, on the skills of the individuals comprising the committee and the advisory staff supporting them (i.e., Eurosystem staff). Moreover, the pooling of information by committee members improves the shared information set (see Jung 2011; Jung and Kiss 2012). Agreement in monetary policy committees is normally based on a (statutory) voting rule. In practice, some central banks take monetary policy decisions by majority, whereas others require a consensus among members. What voting rule can deliver the best outcome in a given real-time situation is an open question.

[1] The views expressed are those of the authors and do not necessarily reflect those of the ECB. The authors are grateful to Claire Vaudry for her valuable assistance in finalising the article.
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[2] In fact, Blinder (2004) refers to this development as a "quiet revolution" in central banking. This shift was accompanied by a global trend towards central bank independence (see Jung, Mongelli and Moutot 2010).
[3] Such a diversity of views within a monetary policy committee is beneficial when taking monetary policy decisions (Bank for International Settlements 2009).

The ECB's decision rules and their role

Monetary policy committees agree on policy decisions by means of agreed decision rules. In this respect, a voting rule provides a platform for discussing the "true" preferences of committee members on available policy options. To be effective, a statutory voting rule must be observed by all committee members. In the presence of disperse preferences and views across members, the rule must enable agreement on a policy option. The voting rule is therefore a way of dealing with uncertainties in monetary policy committees.

Most voting rules are based on the assumption that an individual voter in the committee exists whose preference will determine (i.e. lead) the choice of policy decision. In some instances, however, the outcome of the vote may be a priori indeterminate (e.g., when views are heterogeneous and the voting rule requires unanimity). Moreover, strategic behaviour aimed at exploiting information asymmetries or log-rolling (Bernholz 1974) can lead to biased outcomes and prevent the voting procedure from effectively revealing members' "true" preferences. After a vote has been held, the outcome might be reported in the minutes or in the form of a voting record to better communicate the committee's views and enhance accountability (Issing 2005). The ECB, however, emphasises the collective accountability of the Governing Council and does not report (attributed) voting records (Jung et al. 2010).

Generally interest rate decisions by monetary policy committees are taken either by unanimity, by consensus, or by some form of majority of committee members (Bank for International Settlements 2009, 86). In the literature, the various advantages and disadvantages of different voting rules have been discussed (Smidkova 2003). Majority voting is more common because it always provides an outcome with which most committee members agree, i.e., the decision always reflects the preferences of a majority of committee members. The ease of reaching agreement on decisions through majority voting has to be balanced with the costs in terms of potential policy error when a monetary policy decision is taken too "quickly". Consensus typically characterises a situation where all (eligible) voters unanimously agree to the outcome of the decision-making process (Tideman 2006, 11).

Article 10.2 of the Statute of the European System of Central Banks (ESCB) and of the European Central Bank states that the Governing Council must act by a simple majority. In the event of a tie, the President of the ECB has a casting vote. In practice, however, the ECB's Governing Council takes decisions on monetary policy by consensus. Here, a situation whereby a minority of voters does not express strong dissent with the outcome of the vote is still considered to represent a consensus.[4] The Governing Council acts as a collegiate body in line with the one member, one vote principle. This means that, except for decisions on specific financial matters, the votes are not weighted. Moreover, the Governing Council's decisions on monetary policy must be based on a euro area perspective (Scheller 2006). When taking decisions, the members of the Governing Council do not act as national representatives, but in a fully independent, personal capacity.

Throughout the financial crisis, the ECB's decision rules attracted a lot of media attention. The widespread belief that ECB decision-makers have a euro area focus and take their decisions as an independent body has recently been challenged. Two academic studies have found that the ECB's monetary policy decisions may have been influenced by national interests. Hayo and Méon (2011) suggest that in the years preceding the financial crisis, the ECB's Governing Council would have set, on average, higher interest rates if policy-makers had not de facto based their decisions on economic circumstances prevailing in their home country. Badinger and Nitsch (2011) make a similar point from a different angle. They assert that the nationality of ECB staff could impact monetary policy decisions indirectly through monetary policy preparations. In multinational organisations like the ECB, the nationality distribution is dispersed and may differ from individual country weights. In their empirical analysis, they find a surprisingly close match between the national representation of managers in the ECB's core business areas and monetary policy decisions. These studies are interesting but, at the same time, they seem to disregard the fact that the ECB's interest rate decisions so far have reflected a large consensus in the Governing Council, and many decisions were supported by the unanimity of its members. Admittedly, some members of the Governing Council have voiced

[4] See Moutot, Jung and Mongelli (2008, 37).

public dissent in relation to certain monetary policy tools (non-standard measures) aimed at restoring the functioning of the transmission mechanism in the euro area.

Decision-making by the Governing Council

The impact of uncertainty on decision-making

Monetary policy decisions require timely and high-quality micro and macroeconomic indicators, as well as a framework for analysing these indicators in a forward-looking manner. Members of monetary policy committees may face multiple sources of uncertainty as to which elements are indispensable for their deliberations on monetary policy. When policy-makers discuss monetary policy actions in real time they typically face considerable uncertainties about the most likely future state of the economy. Data uncertainty is important because statistics are subject to revisions that can change a policy assessment in real time. There may also be model uncertainty or uncertainty about the working of the transmission mechanism. Another key source of uncertainty concerns the interaction between the central bank and the private sector as well as other policy-makers because of their potential impact on private expectations.

Several monetary policy committees follow a risk-management approach to dealing with multiple sources of uncertainty. Under this approach, the ability of policy-makers to cope with multiple sources of uncertainty essentially depends on their ability to adopt a medium-term orientation and to look through the volatility of monetary, economic and financial developments. In this respect, the medium-term orientation of the ECB's monetary policy strategy gives policy-makers the flexibility required to respond in an appropriate manner to the different economic shocks that might occur.

As far as the European monetary union is concerned, the ECB initially faced additional sources of uncertainty as a result of the regime shift associated with the launch of the euro and the creation of the euro area. No reliable statistics existed for the new currency area prior to the introduction of the euro. Policy-makers accustomed to analysing the monetary policy transmission mechanism from a national perspective had to adopt a euro area perspective. In addition, as a new central bank, the ECB had to build its own reputation and hence credibility to avoid introducing an additional source of uncertainty (European Central Bank 2001).

The Governing Council's decision-making cycle

The Governing Council meets twice a month (generally on the first and third Thursday of the month) and devotes the first meeting to discussing monetary policy decisions. In addition, over recent years, teleconferences have been held to facilitate timely discussion of how best to address the exceptional nature of the financial crisis. Jung et al. (2010, 337) illustrate the various stages of the Eurosystem's monetary policy decision-making process. The preparation stage, which involves gathering technical inputs from all Eurosystem staff and from the Eurosystem committees, is aimed clarifying the facts and assumptions relevant to monetary policy decisions. Eurosystem staff make significant contributions to the discussions by preparing briefing notes, projections and model analyses. The Governing Council regularly monitors two analytical perspectives, referred to as the "two pillars", namely an economic analysis to identify short to medium-term risks to price stability, and a monetary analysis to assess medium to long-term inflation trends. At the decision-making stage, the ECB follows a two-tier approach: one decision-making body (the Governing Council) is in charge of policy decisions, and another decision-making body (the Executive Board) is in charge of preparing these policy decisions.

The Governing Council follows an agenda according to which committee members vote at the end of the meeting. This has the advantage that the final vote is based on all the information available and shared at the time of the meeting (Berk and Bierut 2005). A press conference is held immediately after the policy meeting at which the Governing Council explains the rationale for its decisions to the general public (communication stage). On this occasion, the President reads the Introductory Statement, which has been agreed by all members beforehand. It contains the Governing Council's assessment of future risks to price stability against the background of the ECB's monetary policy strategy. It also includes its view on fiscal policy and structural reform developments. Thereafter, the Executive Board ensures that the monetary policy measures (standard and non-standard) are implemented by Eurosystem staff in line with the Governing Council guidelines (implementation stage).

The years preceding the start of the financial turmoil in 2007 and the Lehman Brothers bankruptcy in 2008 were characterised by an ever increasing sophistication and opacity of financial innovation and the world-wide spreading of assets which turned out to be toxic. The financial crisis showed that global financial markets and interconnected financial institutions are subject to systemic risks; hence its resolution required a more coordinated response than usual. In performing its tasks, the Eurosystem maintains working relations with relevant institutions, bodies and fora, both within the EU and internationally. In order to address the severe tensions in financial markets, changes in the governance structure were made with the creation of the European Financial Stabilisation Mechanism (EFSM) and the European Financial Stability Facility (EFSF). The ECB enhanced cooperation with these fora and bodies, and with other central banks worldwide (such as the Federal Reserve System, the Bank of Japan, the Bank of England and the Swiss National Bank). In fact, the network of global central bank cooperation is as dense as the network of integration in the global financial system itself.

While central banks quickly lowered interest rates in view of the downside risks to price stability and economic growth, this response was mainly the outcome of their individual strategic deliberations. Other measures, like those relating to foreign exchange swaps, were closely coordinated among central banks. The Eurosystem also temporarily provided liquidity in foreign currencies during the financial crisis, most notably in US dollars, at various maturities. It used reciprocal currency arrangements with the Federal Reserve System to provide funding in US dollars against Eurosystem eligible collateral to support banks' dollar funding. In this respect, a more active cooperation stage is a new element of the monetary policy process, which has led to some modification of the communication lines of independent policy-makers.[5] It has also helped to make better information available during the decision-making phase and, as illustrated by the foreign exchange swaps, it has affected the way that the implementation stage is conducted.

[5] The economic and financial crisis brought about certain institutional innovations through which the ECB's involvement in the economic governance structures for Economic and Monetary Union (EMU) has been further increased. See Bodea and Huemer (2010).

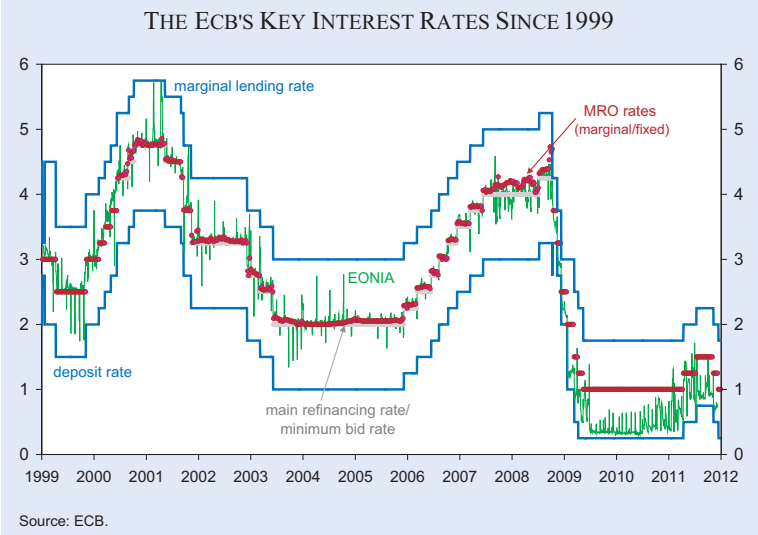
Normal times versus crisis times

What distinguishes normal times from crisis times? While uncertainties are always present, they can become acute during times of crisis. In normal times, policy-makers are mainly concerned about the costs of possible policy mistakes and worry less about the statistical distribution of risk in their assessments (Taleb 2007). A financial crisis may increase preference heterogeneity and the diversity of views among members of a monetary policy committee. Both considerations can make it more difficult to reach a consensus on the monetary policy response. When policy-makers have to cope with a very high degree of uncertainty surrounding "model-based analysis", they may depart from the risk-management approach and rely more on heuristics instead (i.e., their whole body of knowledge, experience and beliefs), or simply use their judgement.

During normal times policy-makers discuss standard options on interest rates (no change, lower or tighten) depending on the assessment of risks to price stability over the medium term; for implementation purposes, applying the existing operational framework suffices to steer money market rates in line with policy intentions (see Figure 1). The modus operandi of the Governing Council has changed since the onset of the crisis. In terms of the monetary policy process, crisis times are periods in which regular reporting lines are either stretched very thin, or even become ineffective. Crisis times may result from a major geopolitical event (such as 11 September 2001), or a major financial market disruption (such as the start of the financial turmoil in August 2007, or following the bankruptcy of Lehman Brothers in September 2008). The global financial crisis wiped out diverse financial institutions, disrupted trade links and led various economic sectors in diverse countries into a critical condition (e.g., public sector indebtedness soared and household net wealth declined). When responding to the crisis, the Governing Council fully relied on its two-pillar monetary policy strategy, as well as looking beyond the strategy to reflect on possible additional action.

In view of the sudden challenges to important assumptions, it was necessary for both the Executive Board and the Governing Council to hold extra meetings via teleconferencing in order to share new incoming information and to agree on a joint assessment. To summarize, given the extraordinary uncertainties, the Governing Council made more frequent

Figure 1



use of teleconferences, introduced new tools and activated different channels of internal and external communication.

Has the financial crisis changed the ECB's decision-making?

Since its inception the ECB has adopted a clear monetary policy strategy, which has been effective in turbulent times, as well as during quieter periods.[6] One of the key features of the ECB's monetary policy strategy is its two-pillar framework for analysing risks to price stability. The two pillars represent two complementary perspectives on the determinants of price developments. The ECB's robust monetary policy framework builds on lessons drawn from the historical experiences of many central banks over several decades, ranging from failed attempts to fine-tune the economy and the resulting stagflation that prevailed in many industrialised countries in the 1970s to the successful experiences in bringing inflation down to levels consistent with price stability in the 1980s.

Over time, the Governing Council has confirmed its strategy and introduced some improvements. In 2003, in the context of the Governing Council's evaluation of the ECB's monetary policy strategy, it confirmed the quantitative definition of price stability. The Governing Council also clarified that, in the pursuit of price stability, it would aim to keep the euro area inflation rate below, but close to, 2 percent over the medium-term (Issing 2003). In spring 2007, confronted with excessive money growth and perceived serious challenges down the road, the Governing Council decided to conduct further research with the aim of enhancing the ECB's monetary analysis (Papademos and Stark 2010). These assessments have confirmed the soundness of the two-pillar monetary policy strategy since the introduction of the euro, including the prominent role given to monetary analysis as a useful guide for monetary policy decisions.

The ECB draws a strict dividing line between monetary policy decisions and the implementation of those decisions through monetary policy operations. This "separation principle" ensures that the specification and conduct of refinancing operations are not interpreted as signals of future changes in the monetary policy stance. In response to the financial crisis and its aftershocks, the Eurosystem has taken measures that are unprecedented in a context of unusually high uncertainty and continuing instability in financial markets. In addition to conventional interest rate cuts to historically low levels, the Governing Council has adopted non-standard measures comprising enhanced credit support and the Securities Markets Programme.

Concluding thoughts

In times of crisis, monetary policy decision-making by committees has had important advantages for the ECB. It has encouraged a rich discussion with a diversity of views, which has contributed to avoid or minimise policy errors. Yet achieving consensus on monetary policy is more challenging in crisis times than in normal times; policy-makers may disagree more widely on the best response to shocks given the great uncertainties concerning indicators, forecasts and the transmission mechanism. The ECB has addressed the need for timely action by obtaining more reliable data through a monetary policy process that fully

[6] European Central Bank (2011; Chapter 5) gives a detailed account of the ECB's monetary policy decisions since 1999 and explains the interaction of economic and monetary analysis underlying the Governing Council's decisions. It is noteworthy that monetary policy decisions in normal times were taken by consensus in most instances.

includes the national central banks in the Eurosystem's monetary policy preparation. This has paid off, as understanding the risks to both price and financial stability increasingly requires knowledge about developments in individual euro area countries.

The monetary policy decision-making process of the Eurosystem has evolved further in response to the crisis. Events sometimes unfold rapidly, volatility augments, central scenarios shift, and new data and information are obtained with substantial lags (while the scenarios continue to change). Yet throughout the global financial crisis and the sovereign debt crisis, the ECB's Governing Council has demonstrated a capacity to rapidly assess the changing monetary and financial market environment and reach agreement on decisions. It has also expanded and adapted existing tools with the aim of safeguarding price stability (Trichet 2010). Both standard and non-standard monetary policy measures have been adopted. To some extent this has surprised many observers, who predicted that the Governing Council would not be able to cope with these challenges based on the assumption that a consensus-oriented decision-making process takes more time. In this respect three factors were crucial: the ECB's monetary policy strategy, the high level of competence of the Governing Council members and the consensus mode of their deliberations.

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Assessing the European Central Bank's Euro Crisis Policies

Ernst Baltensperger*

The European Central Bank (ECB) has a well-defined, clear mandate: to maintain price stability within the Eurozone and, as long as this prior objective is met, to support the general economic policies in the Community. It is well understood – as it is for any other modern central bank – that its monetary stability objective includes ensuring smooth operation of the Eurozone payment system and money market. This mandate, as well as the way the ECB chose to set its policy under it, met widespread approval during the first ten years of its existence. This has been of paramount importance to establishing the Euro as a successful, stable currency over this period. Indeed, this mandate and the high degree of institutional independence granted to the ECB in pursuing it probably are the strongest features of the architecture of the newly created Monetary Union, providing it with a much needed counterbalance to a number of other, structural weaknesses resulting from the Union's large degree of heterogeneity and the corresponding economic and political tensions and risks.

Views on all this have changed dramatically since the onset of the Euro crisis of recent years. In response to this crisis, the ECB has extended its range of actions in ways which have led to both internal controversy in the ECB Council and to external challenge arguing that the ECB is overstepping its mandate. A heated and often emotional debate has started, not only about the appropriate interpretation of the ECB's given mandate and the procedures and policies allowed under it, but also about this mandate itself and whether it is too narrow and should be broadened.

The global financial crisis has led central banks around the world to extend the range of policies considered. "Unconventional" monetary policy measures have become common, including "quantitative easing" and "credit easing" in various forms (meaning direct interventions of the central bank in segments of the credit and capital markets where, with good reason, they have traditionally refrained from being active). The success of such interventionist policies remains to be seen in the future. While the ECB has been more reluctant than others in the use of such measures, it has started its own controversial program of acquiring sovereign debt of financially troubled members, beginning with large purchases of Greek government debt in May 2010. While this is defended by the ECB as a measure ensuring the operational stability and efficiency of money markets in these countries, it clearly has the effect of supporting them financially by keeping their refinancing conditions more comfortable than they would otherwise be. In this sense, it represents a violation of the Treaty on the Monetary Union and its no-bailout provision, at least in spirit if not in law.

Today, many urge the ECB to go even further in this direction, ultimately in form of an unreserved commitment to unlimited purchases guaranteeing these countries access to capital markets at "reasonable" financial conditions (whatever that may mean). Bringing out the ECB's "big bazooka" is dramatically advertised by many as the only remaining solution for ensuring the coherence of the Eurozone and survival of the Euro (and possibly the EU itself). A variant sometimes suggested is extending a banking license to the European Financial Stability Facility, giving it unlimited access to ECB credit which it could transform into help for the financially suffering member countries. The ECB has also been sharply criticized, especially in Germany, for having allowed a large run-up of net creditor and debtor positions under its Target 2 system, with Germany being a net creditor to the tune of over 300 billion Euros.

The central concern in all this is that it will move (or already has moved) the Eurozone towards a dangerous course mixing up monetary and fiscal motives for public policy actions. A dependence of monetary

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policy on the decisions of fiscal authorities is, historically speaking, the biggest risk to monetary and financial stability. In the context of the European debt crisis and the associated weakness of the European banking system, which might make a recapitalization of banks through the states necessary sooner or later, this is a potentially explosive risk.

Independence of monetary policy from fiscal decisions has been a basic premise of European Monetary Union architecture. I am strongly convinced that this is of central importance for the Union's long run survival and must be preserved at all cost. Of course, in a consolidated view of the public sector, monetary and fiscal decisions are linked to each other through the sector's budget constraint. Central bank profit (seigniorage) is part of public sector revenue. In this sense, monetary and fiscal actions must be coordinated in one way or another. But precisely for this reason it is of paramount importance to choose the appropriate pattern of coordination. The monetary authority must have priority in setting its instruments in pursuit of its mandate (which asks for monetary stability and not, not even indirectly, for fiscal objectives), and the fiscal authorities must adjust and passively accept whatever fiscal revenue results from this central bank action. This is the only type of coordination consistent with enduring monetary stability and success. In the case of the Eurozone, where the fiscality of not just one federal government is involved, but that of 17 independent members, this is all the more obvious.

Against the background of this premise, I will examine two issues already referred to above:

1. Should the ECB maintain and extend its purchase program for member country sovereign debt? In particular, should it make an unconditional commitment to buy such debt in order to ensure "acceptable" financing conditions for financially weak members?[1] Would such a policy be successful at all?

2. Should the ECB adjust its policy vis-à-vis Target 2 and the resulting imbalances in net credit positions between member countries?

[1] It has become common to refer to such a policy as "Lending of Last Resort" for countries. I refuse to use this terminology, as the traditional doctrine of Lending of Last Resort was never meant to apply to governments and states, but only to banks. It was always seen as a response to a problem of asymmetric information specific to private capital markets and banks. In my view, it does not apply to governments in any way.

The ECB and member country sovereign debt

We must differentiate central bank purchases of government debt according to motivation:

- *Government debt purchases as an instrument of "normal" monetary policy.* Many central banks have a tradition of buying outstanding debt of their governments on the secondary market as a matter of routine, typically short-term debt. This is the textbook example of an open market operation. There is nothing wrong with it, as long as the central bank is guided by monetary policy motivations, i.e. it is setting the conditions for these purchases in accordance with its monetary policy objectives and mandate.

- *Government debt purchases as an instrument of "unconventional" monetary policy.* Some central banks, notably the US Federal Reserve and the Bank of England, have engaged in large purchases of government debt, of different maturities, in order to directly influence the conditions in the corresponding market segments. The shift to this policy of "quantitative easing" is due to the fact that central banks' traditional policy rates, like the Federal Funds Rate in the US for example, were close to zero already and thus not useable as an active instrument anymore. Again, in principle, there is nothing wrong with such measures, as long as the central bank's underlying motivation is one of monetary policy. Of course, these policies and the huge increase in liquidity generated by them are risky. Only the future will tell whether central banks will be able and willing to rein in this liquidity in due time, once economic conditions normalize and the demand for liquidity returns to traditional levels.

- *Government debt purchases with a (possibly hidden) fiscal motivation*. In practical terms, it is difficult to keep monetary and fiscal motives apart, once the central bank starts intervening directly in the markets for long term government bonds and consciously works at keeping long-term rates low. Central banks such as the Federal Reserve or the Bank of England officially justify their policies of quantitative easing in monetary policy terms. Intellectually, this is defensible. Nevertheless, suspicion that fiscal motives may also play a role cannot be very far. Fiscal motives can enter in two ways. Firstly, keeping rates low means direct relief for current government

finances. Secondly, factoring in future inflation may lower the real burden of existing government debt (as long as inflation premiums adjust only with lags). In Europe, the ECB defends its sovereign debt purchases with the need to stabilize money markets and banking systems in the troubled periphery countries, and thus in the Eurozone overall. Again, this is an intellectually supportable argument. However, since the effects of these purchases are so obviously and directly fiscal, and since fiscal woes are at the very heart of today's Eurozone problems, it is difficult to accept it at face value.

Should the ECB make an unconditional commitment to buy member country sovereign debt without limits, in order to support the markets for this debt and force interest rate spreads back to "reasonable and acceptable" levels?

This is often proposed today as the only efficient, or even the only remaining, crisis solution mechanism for the Eurozone's troubles, by investors, politicians and academics alike, especially from Anglo-Saxon quarters. In my view, this a high risk proposal which is likely to have damaging, and possibly fatal, long-run effects for the ECB as an institution and Eurozone architecture overall. For this reason, moreover, it is not at all clear that it would work as expected even in the short run.

The most serious flaw and long-run risk of the proposal is that the ECB would assume an essentially fiscal role. True, markets can exaggerate, especially in crisis situations. It is possible that risk premiums for some countries are overstated by the market today. But can we be sure of this? Interest rate spreads before Monetary Union were even higher than today. And how does the ECB decide on what constitutes an appropriate country by country structure of rates? The ECB would come under heavy political pressure to set rates according to the (fiscal) desires of member countries. It is very hard to see how central bank independence could be preserved under these conditions. The ECB would become dependent on the fiscal wishes of 17 independent member governments. These governments would try to exert influence effectively loosening their own budget constraints. This could hardly be helpful for fiscal discipline and structural reform in the crisis countries. On the contrary, it is likely to slow up the reform process and prolong the crisis.

Some discussants see these dangers, but argue that they can be overcome by announcing an unconditional future return to the no-bail-out principle, while pledging for unlimited ECB purchases of government debt as a crisis solution mechanism now (e.g. Wyplosz 2011). However, it is extremely difficult to see how you can credibly commit to something for the future, when you do precisely the opposite now. This is particularly true if the suggested solution for the present rests on a violation of existing law: the no-bailout principle is part of existing law; it has been violated, and with the proposal it would be further violated.

Many defend the proposal by arguing that, if only the ECB was forceful enough, the mere announcement would be sufficient and no actual purchases necessary. However, this is likely to be wishful thinking. It might hold true if current Eurozone woes were entirely due to market exaggeration, with no "real" underlying problems. But nobody believes that. It is common knowledge that important Eurozone members require deep structural reform and adjustment; otherwise, the currency union will never be able to overcome its internal imbalances.

Mere reliance on an announcement effect would require full credibility. Full credibility in turn requires unanimous support among all relevant participants. The latter could never be expected, as the biggest and most important player, Germany, is very much opposed. At best, a temporary calming of markets could be hoped for. But not even this is certain. With incomplete credibility, the private holders of sovereign debt might see the ECB's offer as a chance to load off and sell, creating a vicious, rather than virtuous, circle – not least in view of their current experience with Greek debt. In the medium and long run, markets would undoubtedly realize the illusionary character of the plan and see it for what it really is, a big bluff: If the ECB actually had to buy up major parts of the debt of its member states, the Eurozone would soon be politically destabilized and near its end.

By suggesting that mere announcement is enough and no actual purchases needed, while at the same time relaxing incentives for vigorous reforms in the crisis countries, the plan creates the illusion that the Eurozone's problem is just one of liquidity and can be overcome by a mix of bold action and temporary relief. Indeed, countries like Italy or Spain are not insolvent (yet), but suffer from serious liquidity con-

straints. But the reason for this is that they are on a course which will lead them towards insolvency, if not corrected, and the markets realize this. What they need is decisive reform taking them off the road towards insolvency, especially fiscal and labor market reform, not relief from the need for reform. Of course, such reform must be taken with a medium and long term perspective and, as much as possible, avoid risks of cyclical decline and recession. By creating a credible long-term commitment for efficient and viable social and economic institutions, it must create confidence and encourage consumption and investment. Governments cannot delegate this difficult task to the ECB.

The ECB and Target 2 Balances

Imbalances in the Eurozone's system for automatic settlement of all Euro payments and transfers, Target 2, have become a much discussed topic, especially in Germany. This is understandable. As Hans-Werner Sinn keeps pointing out, over the last few years the Bundesbank has accumulated a huge net creditor position in this system, exposing Germany to significant credit risk beyond what is already implied by all other support programs for financially weak Eurozone members. Net balances of ECSB national central banks in the Target system reflect net capital movements between member countries "organized" through the Eurosystem. In this sense, they are similar (and often compared) to balance-of-payments imbalances under a fixed exchange rate regime (which, at the given exchange rate, had to be financed by equivalent "official" capital transactions). However, note that the Eurozone is not just an arrangement of fixed exchange rates, but a single currency area. In a single currency area, we do not normally pay much attention to "regional" payments imbalances.

How have the large Target 2 imbalances come about? They are the combined result of a (crisis-related) redirection of capital flows from North-South to South-North and the (also crisis-related) shift of the ECB to a policy allowing Eurozone banks unlimited access to central bank money at very low cost. Greek (and other periphery) banks have dramatically increased their central bank credit. This has allowed Greece to maintain private capital exports and imports of goods and services beyond what would otherwise have been possible.

Is this a problem, and why? Firstly, it is a problem for Germany (and potentially other countries in a similar position), as its risk exposure is increased. Given the size of the Bundesbank's claims and its large capital share in the Eurosystem, this is of obvious concern to German taxpayers. Secondly, it is a problem to the extent that Target 2 credits have the effect of slowing up much needed reform in the receiving countries. Then, these credits may help to prolong, rather than overcome, the actual crisis.

What should be done? One view is that the Target system is flawed and must be reformed, once the crisis is over. In particular, periodic (e.g. yearly) settlement of open positions through transfers of marketable assets is proposed. A similar rule of the US Federal Reserve is cited as an example (Sinn and Wollmershäuser 2011). However, I share the concern that such settlement restrictions could seriously lower the efficiency of the European payment system and rob the Monetary Union of one of its central features (Bindseil and König 2011). The cited US rule for yearly inter-district settlement, in essence, is just a rule for redistribution of profit among the 12 district central banks and does not imply capital flows between regions. Consequently, it would not really correct the situation, in particular not the second problem mentioned above. Nevertheless, some variant of it could be used to at least partially compensate Germany for its increased risk exposure.

My own view is, however, that the problem must be mainly addressed by appropriately defining conditions for central bank credit. Unlimited access to such credit creates adverse incentives and cannot be the rule. Consider how we would look at the same issue, if it would happen in a single currency area such as the USA or Switzerland. Imagine that a US member state, say Texas, is broke, and as a result the Texan banking system is broke, because it holds a lot of Texan state debt. What would (or should) happen is that Texan banks would not have access to central bank credit anymore. The Federal Reserve would not accept their Texan state bonds as collateral anymore. Their problem would have to be solved through other mechanisms and procedures under the responsibility of bank supervision authorities.

Basically, central bank credit should be limited to fundamentally solvent banks and constrained by the amount of high quality and marketable assets banks are able to put up as collateral. If this time-honored principle of central banking had been employed,

Target 2 balances as experienced today could never have come into existence. It was correct to refinance Greek banks, as long as they could reasonably be viewed as being illiquid, but solvent. However, since the advent of the solvency crisis of the Greek state, this has not been the case anymore. The proper way to deal with Greek sovereign debt and Greek banks would have been through adequate debt restructuring and insolvency procedures. Target 2 imbalances are a consequence of the nonexistence of such procedures and the inability of the EU to understand the importance and necessity of a workable crisis resolution mechanism for member states. This is what led the ECB to extend – and overstep – its traditional role. Whether this was really necessary and desirable under these conditions, and how to get out of the resulting mess, is beyond the scope of this note. In any case, the proper way for the future would be to correct this deficiency and reduce the ECB to its original monetary policy role again, which is challenging enough, after all.

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The Constitutional Design of the European Central Bank

Martin Seidel*

Foreword**

It formulates the monetary policy of the European Union, a policy primarily committed to monetary stability. But it also specifically facilitates the further indebtedness of the governments of economically low-performing member states. It buys government bonds that the rating agencies have assigned junk status and with its measures subsidises individual banks. Nonchalantly it accepts accusations of violations of the rules and the law, including the prohibition of the monetary financing of government budgets. What is the European Central Bank and what are the interests and motivations that guide its policies?

Introductory remarks

In popular opinion, the European Central Bank (ECB) is modelled on the German Bundesbank and, as the Bundesbank was for Germany, is entrusted with the monetary policy of the European Union. But both are not the case. At the Maastricht Conference monetary policy was indeed transferred to the European Community, however, two new institutions of the European Union were entrusted with this responsibility, namely the ECB and a related though not identical entity, the "European System of Central Banks" (ESCB). However, the four main tasks that a central bank traditionally performs in the context of a nation state, namely "the definition and implementation of monetary policy for the Community" the "conduct of foreign exchange operations", the "holding and management of the official foreign currency reserves" of the member states and the "promotion of the smooth operation of payment systems", the Conference of Maastricht did not assign to the ECB but to the European System of Central Banks.[1] Not the ECB but the non-identical entity, the ESCB, is the monetary authority of the EU (see Seidel 1998a). The ESCB, in its current composition of only 17 of the 27 EU member states, refers to itself as the "Eurosystem".

The "European System of Central Banks" as the European monetary authority

The "European System of Central Banks" (ESCB) is a purely intergovernmental association with no legal capacity, composed of the central banks of the member states and the European Central Bank (ECB) created at the Maastricht Conference. The national central banks and the European Central Bank, according to the Treaty of Maastricht/Lisbon, are not members but an "integral part" of the ESCB. The Treaty of Maastricht/Lisbon does not give a more precise definition of the ESCB and declares it to be neither an organisation nor an institution of the European Union. From the contractual rules of the Maastricht Treaty the conclusion can be drawn firstly that the national central banks as an "integral part" of the ESCB are not new institutions of the European Community; instead, regardless of the obligations imposed on the member states to release them as far as necessary into independence, they remain institutions of the member states. Their affiliation as an "integral part" of the ESCB does not make them an organisational association in legal terms, neither with one another nor with the ECB as a system partner and, despite the opinion heard even in expert circles, is not comparable to the status which characterised the former German central bank branches (Landeszentralbanken) within the German central bank organisation. The German central bank branches were at no time institutions of the federal states but with their regionally-based

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[1] Article 127 TFEU, ex Article 105 of the EC Treaty.

tasks and competencies were dependent divisions of the German Bundesbank (Seidel 1998b).

As an intergovernmental association composed of national central banks that remain national institutions and the ECB as an institution of the European Union, the ESCB is not an independent intergovernmental or supranational organisation that exists alongside the European Union or that is integrated into the EU. To be able to make this claim, the national central banks would have to have been separated from the state organisation of the member states, which was in fact under consideration. The Maastricht Treaty also did not upgrade the ESCB into an organ of the European Community, not because the ESCB had no structure similar to that of the other organs but because if the ESCB had been given the status of an official organ, the ESCB's independence from the policy making and from the other institutions of the European Union was considered to have been at risk. The ECB has legal capacity and, as we will show, even exercises sovereignty for both the European Union as such and for the ESCB. However, the consequent higher status of the ECB as an "integral part" of the ESCB in comparison to the national central banks as system partners, has no constitutive effect on the organisational and legal status of the ESCB as such.

The ESCB or the "Eurosystem"[2] is led by a "Governing Council", composed of the – currently – seventeen governors of the national central banks and the six members of the European Central Bank. The methods by which the members of the Governing Council, the main body of the ESCB, are appointed or vested with their office, are different depending on group membership and reflect the purely intergovernmental nature of the ESCB. The six members of the Executive Board of the ECB are chosen by the usual method of appointment of members of the so-called unitary organs of the European Union, the Commission and the European courts jointly by the member states – since the Treaty of Lisbon by a majority – for a period of eight years. In contrast, the governors of the national central banks are not appointed in such a "Community procedure", in itself only confederally structured, but by the respective national governments according to national law and national practice, without there having to be agreement between all member states. European Union law, which has no specific statutes for the national central banks, stipulates only that the term of office of the national central bank governors must be at least five years and that recourse to the European Court of Justice is possible in cases of the dismissal of a governor by a member state. The rules for the two bodies differs also in that the governors of the national central banks presidents can be re-elected, whereas for reasons of rotation of offices among the member states (or perhaps to strengthen the position of the national governors in the Governing Council?), the re-election of members of the Executive Board of the European Central Bank is not possible.

Voting in the Governing Council

The Governing Council of the ESCB makes its decisions by a simple majority on monetary policy issues, especially in interest rate decisions, which for the business world are by far the most important decisions of the European Union. The President of the Executive Board of the ECB or the six members of the Executive Board together have no veto rights. The Executive Board of the ECB can thus be overruled at any time by a majority of the governors of the national central banks. In terms of the decision making of the Governing Council in monetary-policy issues, even though this has been delayed with regard to its application, there exists since several years a sophisticated system of rotation and the temporary exclusion of the right to vote, according to which, depending on the importance of their national economy, the national central bank governors are divided into three groups and are excluded from voting for a certain period of time (see also Seidel 2008, 545).[3]

European Central Bank

From the perspective of the general public, business, the banking world and even large segments of the professional experts, the European System of Central Banks (ESCB), which is still the Eurosystem, does not shape the monetary policy of the European Union but solely the European Central Bank (ECB) acting autonomously. This impression is primarily fuelled by the fact that in order not to irritate the capital and financial markets, central banks or central

[2] The ESCB in its present still narrow composition of only 17 member states participating in the currency area.

[3] Article 10.2 of the ESCB/ECB Statute.

bank systems are only allowed to speak with one voice, usually that of its president, and also in the case of the ESCB, the President of the ECB communicates with the financial and capital markets on behalf of the ESCB. To the extent that also the ESCB is anchored in the consciousness of the general public, business and professional circles as the true designer of monetary policy, it is assumed that within the ESCB the ECB assumes a prominent position and directs the ESCB, namely the national central banks, just as once the German Bundesbank directed the German central bank branches.

The ECB stands out from the national central banks, its system partners, by means of a unique organisational structure and interlacings with the ESCB in that the ECB as an organ-like institution of the European Union exercises its own powers. The appraisal that it assumes a leadership role within the ESCB and even must be identical with the ESCB is therefore understandable.

The ECB, as the ESCB, has a governing council as its main body and an executive board as its second body. The bodies of the ECB are not only similar to the two bodies of the ESCB in terms of personnel, but both organizations have one and the same organs. Evidently in order to establish a certain dominance of the ECB, the Treaty of Maastricht/Lisbon prescribes the allocation of the two organs to the ESCB and the ECB not such that the ECB is directed by the organs of the ESCB, but conversely the ESCB is headed by the two organs of the ECB.[4]

The presumed independence of the ECB or even its supremacy over the ESCB and the national central banks is, however, called into question by the allocation of competencies to the two bodies of the ECB. The functions and powers allocated to the ECB, which are examined more closely below, fall within the ECB not in the area of competence of its six-member Executive Board but are almost predominantly the responsibility of the Governing Council. In principle they are contractually distributed in such a way that the Governing Council determines the "guidelines and decisions" and that the competencies of the Executive Board are limited to the "execution"[5] and to the "operational management".[6]

[4] Article 8 of the ESCB/ECB Statute.
[5] Article 12.1 of the Protocol on the Statute of the European System of Central Banks (ESCB) and the European Central Bank (ECB).
[6] Article 11.6 of the ESCB/ECB Statute.

EU law clearly stipulates that additional competencies of the Executive Board require a decision by the Governing Council to transfer these competencies.[7] The power of the ECB set down in the treaties to issue regulations and decisions is not exercised by the Executive Board but the Governing Council.[8]

The peculiar structure of the central bank system created in Maastricht has nothing in common either with the German Bundesbank, with its predecessor the Bank of the German States (Bank Deutscher Länder) or with the US central bank organisation, the Federal Reserve System (FED). The structure can only be explained by the fact that at the Conference of Maastricht the ESCB as the designated body responsible for monetary policy, given its confederative nature was indeed entrusted with the tasks of a central bank in the political sense but could not be given all the other powers of a central bank, which, for example the issuing of bank notes, would require it to have a legal capacity. In order for the ESCB as the organ responsible for monetary policy to be able to carry out the functions of a issuing bank to the full extent, the ECB had to be placed along its side as its "agent". To secure the material dominance of the ESCB over the ECB, the unity and identity of the ESCB and the ECB had to be contractually anchored in the institutional area as well as within the ECB the predominance of the Governing Council over the Executive Board. The ECB owes its existence to the fact that the ESCB, which encompasses the national central banks and whose logical transference to the responsibility in the European Community was not desired, can only carry out the function of a central bank in its entirety if it has a legal "outer face" at its side, the role assumed by the ECB. In that the Governing Council of the ECB and the Governing Council of the ESCB is identical and given that the ECB Governing Council, whose competencies with few exceptions are exerted by the Executive Board, there are grounds to doubt that the purported primacy of the ECB over the ESCB and also over the national central banks, will prove to be illusory.

The authority assigned to the ECB to give instructions to the national central banks is indeed one of the few competences that is exercised not by the

[7] Article 12.1 of the ESCB/ECB Statute.
[8] The European Central Bank, represented by the Board of Governors and based on the unequivocal wording of the relevant rules of the Maastricht Treaty, and now the Treaty of Lisbon, uses this power not to fulfil its own or its delegated competences but "in order to carry out the tasks entrusted to the European System of Central Banks"; See Article 132 TFEU.

Governing Council of the ECB but by the Executive Board as its own responsibility.[9] This does not contradict, however, the above-made observation that (contrary to opinions sometimes expressed) a dominance of the ECB over the ESCB cannot be assumed. According to both EU and national law, "instructions" are not legally binding. They develop binding effects only indirectly on the condition that a hierarchical legal relationship marked by dependence exists between the issuer and the recipient of the instruction. The effectiveness consists in the fact that the recipient, in the event that he does not follow the instruction, must reckon with adverse consequences due to his dependence on the issuer of the instruction. Within the ESCB, however, there is no such structured dependency of the national central banks. The integration of the national central banks in the ESCB as its "integral part" has not led to a subordination of the national central banks to the ECB. The European Union for its part has no general authority over the member states to issue instructions from which an effective authority of the ECB over the national central banks could be derived. Its regulatory power is based on the so-called principle of limited individual authority, according to which the discretionary powers of the European Union just as its legislative powers require a special legal authorisation. The Commission, which is responsible for supervising the proper implementation of policies and compliance with the law of the European Union by the member states, because of a lack of subordination of the member states, has at its disposal for implanting its task no authority over the members states but only the option of taking a case before the European Court. Recognising that the granting of "authority" would otherwise be completely meaningless, the Conference of Maastricht granted the ECB the right to lodge complaints against the national central banks at the European Court of Justice.[10] To enforce an instruction by means of lodging such a complaint, the Executive Board of the European Central Bank, however, requires a decision of the Governing Council.[11,12]

It is also worth inquiring into the alleged authority of the ECB to issue banknotes. Under the Treaty of Maastricht the authority to issue central bank money has been transferred not exclusively to the ECB but also to national central banks.[13] In fact, the coins as well as the banknotes, as seen by the letters assigned to each member states on the serial number of the bank note, are issued by the national central banks and not by the European Union. However, because the ECB has been assigned to sole right to "approve" the issuing of banknotes, it presents itself indeed as a "bank notes issuing, i.e. complete, Central Bank" that supplies the economy if not directly at least indirectly in a centrally controlled manner with money and which ensures monetary stability. The national central banks as well as the ECB itself are subject to the obligation to supply the economy with money and to ensure the stability of the currency. The powers of the ECB extend so far that if necessary it can require the national central banks to fulfil their obligation by calling on the European Court of Justice.

However, within the ECB the responsibility for granting permission to the national central banks to issue banknotes rests not with the Executive Board but with the Governing Council. The responsibility for ensuring the stability of the currency of the European Union in supplying central-bank liquidity thus lies – and the same applies to the creation of so-called bank money by the commercial banks – with the ECB in conjunction with the ESCB. As with the adoption of general guidelines for monetary policy, the Governing Council decides on the granting of permission to issue banknotes with a simple majority, so that a majority of the national central bank presidents can outvote the members of the Executive Board.

It is also worth enquiring into whether the ECB can sufficiently control the "collateral" in the issuing of banknotes by the national central banks. The national central banks provide money to commercial banks only against collateral that must be provided in the form of securities. Since the security types have different security values, it is necessary – in a system in which several central banks issue money that affects the entire currency notes and that supply commercial banks with money – to have uniform rules on the admission of securities as collateral. However, EU law defines neither the permissible securities nor does it provide a binding framework for a uniform practice of collateralisation of the national central banks. The Maastricht Treaty contains no authorisa-

[9] Article 12.1 paragraph 2 of the ESCB/ECB Statute.
[10] Article 35.6 of the ESCB/ECB Statute.
[11] This is the case because bringing a case before the European Court requires a preliminary procedure. In this preliminary procedure the so-called "reasoned opinion", which is required for the bringing of the action, is not done, as usual, by the Commission, but, according to a special legal regulation, by the European Central Bank, represented not be the Executive Board but by the Governing Council.
[12] Article 12.1 paragraph 2 of the ESCB ECB Statute.

[13] Article 128 TFEU, ex Article 106 TEC.

tion on the basis of which either the European Parliament and the European Council as joint EU legislators or the ECB itself as a legislator could set down the requirements with which the securities of the national central banks would have to comply. Traditionally, the national central banks of the European Union accept not uniform but quite different collateral when issuing banknotes. To be sure, the ECB has developed – via the "General documentation on Eurosystem monetary policy instruments and procedures of the European System of Central Banks" – concepts regarding acceptable collateral, which however, because they are not legally binding, the ECB cannot enforce via the courts in cases of non-compliance on the part of the national central banks. For enforcement, neither is the ECB's authority nor are the special rights to lodge complaints that the Treaty of Maastricht/Lisbon specifically granted the ECB sufficient in the event that a national central bank breaches an obligation of EU law.[14] Moreover, the "General documentation" of the ECB states, with some restrictions, that more or less all traditional forms of collateral are permissible.[15]

Policy Areas of the European System of Central Banks

The actual policy area of the ESCB and the ECB is the shaping of monetary policy, by which the economy is supplied with money, at the same time ensuring the monetary stability as an economic and social-policy objective (Seidel 2005, 505-37). The primary goal of monetary stability also applies to exchange rate policy, a task that has been assigned to the Council of the European Union in co-operation with the ESCB.[16]

Economic policy

The powers of the ESCB are not restricted to monetary policy, however. Instead, the ESCB also supports the "general economic policy in the Union".[17] In the process, however, stabilising the price-level and the value of the currency must remain the primary monetary-policy target.

The member states are primarily responsible for "general economic policy" in the European Union and not the European Union itself. At the Conference of Maastricht, monetary and exchange rate policy was transferred to the European Community to be sure but not economic policy as well. In the area of the Economic Union, the competences of the European Union are limited in that it coordinates the economic policies of the member states via the European Council by means of a legally non-binding procedure. The reason for the "restraint" in the transferring of powers in the Economic Union is that the shaping of a central economic policy presupposes a "dominant budgetary power" of the European Union. This in turn requires as a controlling instrument a central economic policy, with the member states entrusting their social policies, education and training policies, their economically relevant areas of infrastructure policies and possibly even their defence policy to the European Union. In these policy areas, the European Union would have to be given legislative powers, and for the financing of the tasks to be assumed by the European Union also comprehensive taxation powers. The concept of the Maastricht "Economic and Monetary Union" with a centralised monetary policy and decentralised responsibility for economic policy is not based on the principle of subsidiarity but on the political unwillingness of the member states to transform the European Union into a federation.

The powers of the European Union in its policy of "economic and social cohesion" allow no independent economic policy of the European Union. These powers consist of participation and co-determination competences that neither replace nor call into question the primary responsibility of the member states for their economic policies.

The ESCB and the ECB, while maintaining their commitment to a policy of stability, therefore support not a central economic policy but at best the coordinated economic policies of its member states or the economic policies of individual member states.

Moreover, the authorisation of the ESCB to support economic policy is limited to the so-called "general economic policy". It does not include the "special economic policies" of the member states, i.e., neither the regional and sectoral economic structural policies nor employment policies and labour market policies, both of which are part of economic policy not social policy, nor the economically relevant infrastructure policy nor economically relevant areas of

[14] Article 271 (d) of the TFEU, ex Article 237 (d) of the EC Treaty.
[15] On "The implementation of monetary policy in the euro area", see especially Heinsohn and Steiger 1999.
[16] Article 219 TFEU, ex Article 111 TEC.
[17] Article 127 TFEU.

education and training policy nor all other areas of social policy that are sub-areas of national economic policy.

Stabilization of financial systems and bank rescue

The "stabilization of financial systems" and the "rescue of banks" are to be regarded as special areas of economic policy. As areas of national competence, at no time was the responsibility of stabilising financial markets – similar to agricultural economic policy, transport policy and trade policy – transferred to the European Union; neither to the European Parliament nor to the European Council as legislators of the European Union nor to the ESCB. In order to have transferred this area of economy policy to the European Union, a specific act of transferring would have been necessary, based on the principle of conferred powers, a fundamental constitutional principle of the European Union, which excludes a creeping transfer of sovereignty to the European Union. The provisions of the Treaty of Maastricht, which are often claimed to assert the contrary, are clear. It does not follow from Article 127, Section 5, TFEU that "the supervision of financial markets" is the responsibility of the European System of Central Banks; instead, this provision stipulates that the "the supervision of financial markets" is the responsibility of separate other "authorities" – currently still authorities of the member states but in future the EU's "authorities". The ESCB, and in its midst the ECB, are solely empowered to contribute "to the smooth conduct of policies pursued by the authorities to stabilise the financial system". The limitation of the tasks of the ESCB to a mere involvement in the supervision of the banking industry by other "authorities" serves and ensures the independence of the ECB and the ESCB. If the supervision of credit institutions and thus the assurance of the stability of the financial regimes were transferred to the ECB or the ESCB as an exclusive responsibility, the European System of Central Banks would be subject to the instructions of the Commission and the European Council in the same as national supervisory authorities are to subject to their governments.[18] The recently revealed purchase of government bonds by the ECB, and by the ESCB possibly also via the Greek central bank, is not a legitimate "contribution" of the ECB, and the ESCB, to facilitate the "implementation" of measures adopted by one or more other "authorities" responsible for the stabilisation of financial markets. It is an independent measure of the ECB and the ESCB alongside the rescue efforts of the other 17 countries of the so-called Euro Group and the International Monetary Fund to assist Greece and particularly alongside the "euro rescue package" that the EU member states established to help other member states that are threatened by sovereign default. The European Union and with it the Governing Council of the seventeen member states represented in it currently have no administrative supervisory authority. The transferring of monetary policy to the European Union has not led to a simultaneous transferring of the ensuring of the stability of financial markets and the bailout of the banks as an "annex competence" of the European Union (Seidel 2010, 521).

Independent authority

The independence of the ESCB and thus especially of the ECB is generally regarded to be sufficient.[19] However, some doubts have arisen. The Treaty of Maastricht/Lisbon does not require the member states have to grant their central banks absolute independence, especially the exemption from other duties. The Treaty also does not regulate the independence from instructions in the area of exchange rate policy, i.e., the independence of the members of the Governing Council, who are responsible for exchange-rate policy. According to EU law, in the matter of exchange rate policy, the representatives of the governments in the Governing Council are subject only to the condition that their consensus "is in line with the objective of price stability".[20]

The commitment of the organs and officials of the European System of Central Banks to independence has a more appellative than legal character. Neither the obligation of the member states to safeguard independence from instructions nor the determination of a violation of this independence by an organ of the ESCB, by a national central bank or by one of the officials is likely to be enforceable before the European Court of Justice. The same holds for a Governing Council decision on an exchange-rate policy that does not maintain the stability obligation.

[18] Paragraph 6 of Article 127 TFEU does not alter this conclusion. This provision does not authorise the legislature of the European Union to assign the sole responsibility for the supervision of the credit institutions to the ECB. The authorisation of the legislature is limited to transferring to the ECB the "special duties in connection with the supervision of credit institutions".

[19] Article 130 TFEU, ex Article 108 TEC; also Article 7 of the ESCB/ECB Statute.

[20] Article 219 TFEU, ex Article 111 TEC.

There are tight limits on an expansion of the independence from instructions via the rulings of the European Court of Justice, as has always been the case in other regulatory areas of EU law. In the case of a national central bank disregarding the obligation to independence, only the member state and not the central bank concerned can be prosecuted, whereby the right to bring proceedings rest only with the Commission and other member states. It is quite unlikely that the European Court of Justice in its further interpretation of EU law will consider complaints from private individuals. The decisive prerequisite for a supplementary right of private persons to bring charges, according to the present rulings of the European Court of Justice, namely a secondary and direct effect of the obligation of independence of the ECB and the ESCB and their officials, is as impossible to assume as is a fundamental right to price stability.

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Why Countries Matter for Monetary Policy Decision-Making in the ESCB

Bernd Hayo* and
Guillaume Méon**

The ECB's mission

The mission of the ECB was set in the Maastricht Treaty, which paved way to the European Monetary Union (EMU). Namely, in accordance with Article 105(1) of the Maastricht treaty, Article 2 of the Statutes of the European System of Central Banks and the European Central Bank states that the primary objective of the ECB is to maintain price stability in EMU. The ECB defines price stability asan inflation rate of below, but close to, 2 percent over the medium term.

Article 2 of the statutes of the ESCB and the ECB states that "without prejudice to the objective of price stability", the secondary objective of the ECB is to support the general economic policies in the EU with a view to contributing to the achievement of the objectives of the EU. These include a "high level of employment" and "sustainable and non-inflationary growth". One may note that both the primary and secondary objectives of the ECB are officially federal, as they are defined at the level of the eurozone or even the EU.

The objective of price stability has been achieved quite successfully and inflation expectations in the euro area are now firmly anchored at 2 percent (European Commission 2011). Whether the recent rescue operations of the ECB in the European debt crisis will contribute to higher inflation expectations remains to be seen. A key question, however, is how the ECB weighs its two objectives. Although the ECB has adopted a unique "two pillar strategy", with a variety of indicators for short- to medium-term inflation forecasts and a monetary reference value guiding long-run inflation expectations, it is not obvious whether the monetary reference value has played a substantial role at all. One can even argue that, instead of simplifying communication with the public, the two-pillar strategy does the opposite (Hayo 2003).

Thus, rather than trying to model the official monetary policy strategy to explain ECB decision-making, many researchers adopt a different approach: estimating interest rates reaction functions or "Taylor rules". In a Taylor rule, the deviation of inflation and the output gap – as an indicator of the business cycle – are typically used as variables that help explain ECB decision-making. For instance, Hayo and Hofmann (2006) estimated a forward-looking Taylor rule for the ECB and foundsignificant and plausible results: a one percentage point increase in the inflation rate leads to a 1.5 percentage point increase in the short-term interest rate, and a one percentage point decrease in the output gap, indicating an economic downturn, lowers rates by 0.6 percentage points. What these estimates suggest is that the ECB reacts not only to inflation but also to fluctuations in output, which is sometimes interpreted as evidence that the ECB is less focused on price stability than what its statutes would suggest.

An estimated Taylor rule can also be used to study monetary policy from a normative perspective. This is often done by comparing the actual interest rate path with a "counterfactual" path based on "target rates" derived from the Taylor rule. In the case of the Fed, Taylor (2009) argued that actual interest rates were below those recommended by the interest rate reaction function and thereby fuelling financial market bubbles. A similar argument can be made in the case of the ECB. Applying Hayo and Hofmann's (2006) estimate to

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Figure 1

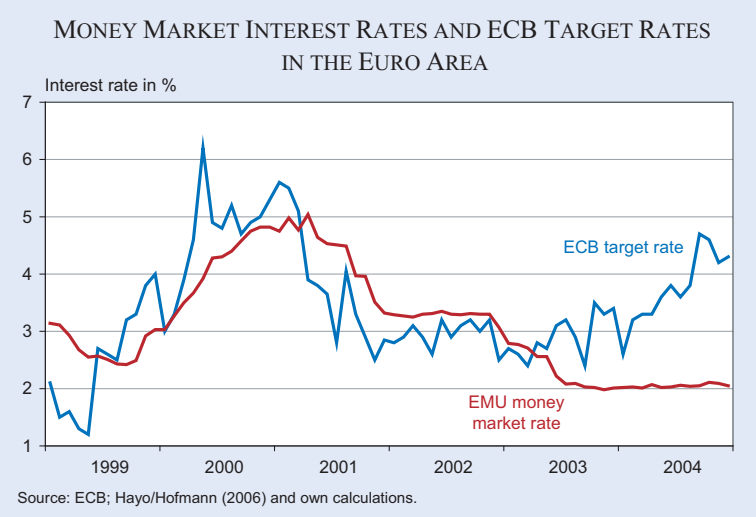
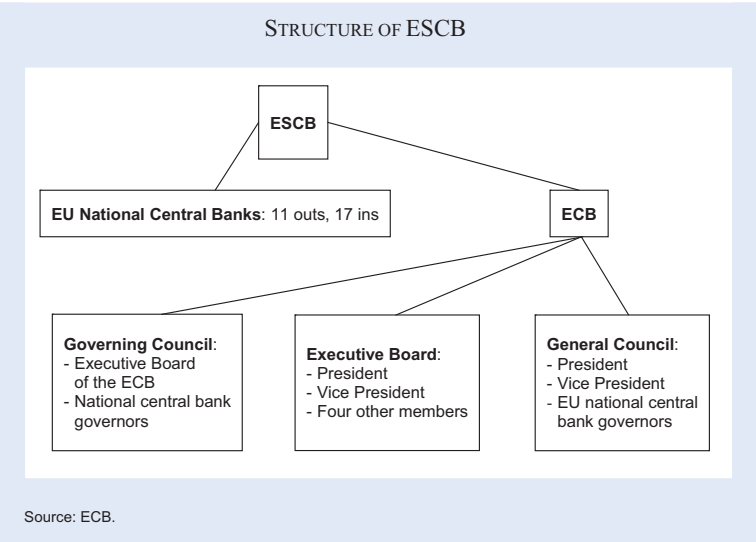


Figure 2



the period preceding the financial crisis, we find that interest rates should have been raised earlier (see Figure 2).

Actual interest rates are less variable than target rates, which emphasises the importance of interest rate smoothing. At the beginning of the observation period, target rates were lower than actual rates but they explain very well the interest rate reductions after 11 September 2001. Target rates would have predicted an increase in interest rates from at least 2004 onwards but the ECB kept rates stable. The interest rate hike finally occurred in December 2005 (from 2 to 2.25 percent). Thus, it is likely that the ECB contributed to the worldwide excess in liquidity, fuelling exuberance of financial markets.

National central bank governors have a large influence on ECB decision-making

Although the Taylor rule is helpful in terms of providing a perspective for the euro area as a whole, it somewhat begs the question of how these decisions actually come about and how they blend federal and national objectives. The institutional structure of European monetary policy reflects the structure of the EU and is fairly complicated (De Haan et al. 2005). A noteworthy feature of the system is that it grants a lot of influence to participating countries, as opposed to the eurozone as a whole. To see this, one has to look into the details of the ESCB's institutional structure and into its decision-making mechanisms.

The European System of Central Banks (ESCB) consists of the European Central Bank (ECB), located in Frankfurt, and all of the EU national central banks (see Figure 1).The ESCB is governed by the Governing Council, the Executive Board and the General Council.

Currently, 17 out of 28 EU members have introduced the euro. Since not all EU members have joined the European Monetary Union, the General Council plays the role of a forum for discussion between "ins" and "outs" regarding monetary policy issues and their exchange rate relations with the euro. However, it has no direct decision-making power and, according to Article 9.3 of the statutes of the ESCB and the ECB, "the decision-making bodies of the ECB shall be the Governing Council and the Executive Board".

The Executive Board steers monetary policy on a day-to day-basis. It is also in charge of preparing the meetings of the Governing Council. It comprises the president and the vice-president of the ECB and four other members. They are appointed by the European Council for a non-renewable term in

office of 8 years. The Executive Board may therefore be considered the true federal body of the ESCB. However, it does not determine monetary policy. Formulating monetary policy principles and interest rate decisions is a prerogative of the Governing Council, which is consequently the true decision-making body of the ESCB. It consists of the six members of the Executive Board and 17 central bank governors from each euro area member country.

Article 10.2 of the ECB statutes posits that decisions of the Governing Council are in principle based on simple majority voting: one person, one vote. EMU member states are relatively more represented than regions in other federal central bank systems, such as the Fed or the Bundesbank. This becomes clear when comparing the relative importance of central and national representatives in the main decision- making bodies of various central banks.

Table 1 shows the ratio of the number of representatives of the centre to the number of representatives of the regions for the ECB, the Bundesbank, and the US Fed. The ratio was 0.89 for the Bundesbank before 1999 and is 1.40 for the Fed. It was 0.55 at the start of EMU and has now shrunk to 0.35. In the ECB Governing Council, national central bank governors have huge influence. Whereas in the US regional Fed presidents with voting power constitute a minority in the Federal Open Market Committee (FOMC), in the ECB regional representatives dom inate the Governing Council.

With 23 members, the Governing Council has already become quite large compared to the Bundesbank (17 voting members) or the FOMC (12 voting members). However, if all EU members adopted the euro, the size of the Council would reach 34, which is likely far beyond the optimal size of a decision-making committee.

Recognising this problem, the ECB developed a new "rotation principle" of decision-making in the Governing Council in 2003. The mechanism was ratified by member countries in 2004 and amended in 2009. It will be adopted when the number of member countries reaches 18. The rotation of voting rights ensures that over time all countries will be represented in the Governing Council, and the "one member, one vote"-principle will still be in place, even though not all national governors will actually be allowed to vote at one point in time and the probability that a governor of the big five countries will be able to cast a vote is relatively higher. It is worth pointing out that, first, the system is designed to allocate voting rights among member countries, not members of the Council. Members of the Executive Board will always have a vote. This suggests that governors of national central banks are viewed as representatives of their country of origin. Second, the rotation system would have already come into power with 15 members if the amendment had not been passed. This indicates that member countries of the Eurosystem appear to value having a voting representative in the Governing Council.

Evidence of national influence on monetary policy

The previous section emphasises that the Eurosystem's member states have substantial weight in the Governing Council. Although we find hints that member countries value voting rights, this does not imply that they will use their influence to steer monetary policy towards national needs. However, given the potentially important role of national interests in the formulation of European monetary

Table 1

Relative importance of representatives of the centre and the regions

	Centre	Regions	Centre/Regions
Bundesbank before 1999	8	9	0.89
US Federal Reserve	7	5	1.40
ECB in 1999	6	11	0.55
ECB with 17 members	6	17	0.35

Source: Updated from Berger et al. (2004).

policy, whether governors and members of the Governing Council can be expected to take only a European view is a key question.

An instructive straightforward way to address the question would be to study the behaviour of members of the Governing council and determine if they exhibit national biases. However, the ECB does neither publish the voting records of its members nor the minutes of its meetings. One must therefore resort to indirect evidence.

A first set of indirect evidence comes from the experience we have with other federally organised monetary unions. The Fed's main decision-making body, the FOMC, is much more open with regard to providing information about monetary policy decisions. Gildea (1992) has found that unemployment rates in the regions represented by the Fed presidents help predict their votes in the FOMC. Meade and Sheets (2005) have reached similar conclusions, not just for regional Fed presidents but also for members of the Board of Governors, who are supposed to represent only federal interests. Hayo and Neuenkirch (2011) have demonstrated that even in terms of monetary policy communication with the public, Fed presidents show clear regional patterns.

These results from the US in conjunction with our discussion about the "rotation principle" of decision-making in the Governing Council suggest that regional interests play a role in EMU. Yet, the ECB has never openly acknowledged any disagreements due to different regional interests. Although voting is explicitly envisaged, it officially reaches decisions by consensus (see ECB press statements). However, if consensus is indeed the only way decisions are made, voting rules would be irrelevant – and there would be no need to change them. Additional doubt is raised by the fact that, unlike other central banks such as the Fed, the ECB does not publish minutes of Governing Council meetings. Thus, possible disagreements are hidden behind a diplomatic veil, and the ECB does not reveal the actual decision mechanism that it uses to reach decisions.

Studies departing from the assumption of an aggregate ECB reaction function have provided evidence that regional developments affect monetary policy. Heinemann and Huefner (2004) have found that regional divergences help explain ECB interest rate decisions. Other studies have found similar evidence and suggest that the ECB places a disproportionately large weight on economic conditions in the bigger EMU member countries (von Hagen and Brückner 2001; Kool, 2006). In contrast to these findings, Sturm and Wollmershäuser (2008) have reported that economic conditions in small member countries receive more than proportional weight in actual ECB monetary policy decisions. Sousa (2009) has assumed that national representatives on the Governing Council take into account national perspectives when they vote on interest-rate decisions, and discovered evidence that voting coalitions are likely. Badinger and Nitsch (2011) have focused on the share of different nationalities in the ECB staff and argued, based on Taylor rules, that national background influences monetary policy decisions.

National influences in the governing council

A large body of theoretical contributions has emphasised the importance of the decision rule used by monetary policy committees, because the chosen decision rule determines the extent to which asymmetric national characteristics are considered in federal monetary policy. Some contributions have considered differences in preferences, in the structure of member economics or in shocks. For instance, Riboni and Ruge-Murcia (2010) have focused on differences in inflation aversion among committee members, Hefeker (2003) has emphasised structural differences across countries, whereas Grüner and Kiel (2004), Matsen and Røisland (2005), Méon (2008), and Farvaque et al.(2009) have looked at differences in shocks across member countries. The common message of these papers is that decision rules in monetary policy committees matter, especially in a federal monetary union.

However, our knowledge of the actual decision-making mechanisms used by the ESCB lags far behind the sophistication of theoretical contributions. As no information has been published about Governing Council debates, its decisions have been analysed from an aggregate, namely, federal, point of view. Riboni and Ruge-Murcia (2010) have studied the aggregate evolution of interest rates set by five central banks, including the ECB. They reported that the consensus model, i.e., a decision-making mechanism where no member has proposal power and a "supermajority" is required for a policy change, conforms to actual policy decisions better than the alternative models. A major drawback of Riboni and Ruge-Murcia's (2010) approach is that they do not

describe the institutional details of decision-making in the euro area. First, they overlook the evolution of the Executive Board and do not adjust its size after Greece joined. Second, and more importantly, their approach does not take into account the federal nature of the Governing Council. In Riboni and Ruge-Murcia's (2010) setting, members of the monetary policy committee disagree because their relative weight placed on inflation and output differ, but they all base their decisions on the euro area's aggregate evolution, without any specific consideration for their home country's economic situation.

In a recent paper (Hayo and Méon, 2011), we have attempted to infer the decision-making mechanism used by the Governing Council and the preferences of its members. We investigated whether members of the Governing Council pursue aggregate objectives or try to implement a monetary policy that reflects the situation of their home country. From the literature, we took estimated national Taylor rules employing historical data so as to produce counterfactual national interest rate paths, i.e., what interest rates a country would have implemented if it were not an EMU member. These counterfactual interest rate paths were then aggregated using different decision procedures and various assumptions as to preferences of members of the Governing Council to produce hypothetical interest rates that can be compared to the historical interest rates set by the Governing Council. We considered four important decision procedures: (i) full chairman dominance, (ii) one man, one vote, (iii) several versions of bargaining, and (iv) the agenda-setting power of the president, under different assumptions about the behaviour of Executive Board members. We also considered two alternative types of preferences of the members of the Governing Council: (i) "federal" preferences, whereby council members seek to implement policies that best suit the euro area as a whole and (ii) "national" preferences, if they seek to implement policies that best suit their country of origin. By comparing the fit of hypothetical interest rates to observed ones, we can determine the decision rule that best describes the ECB's decisions.

Figure 3

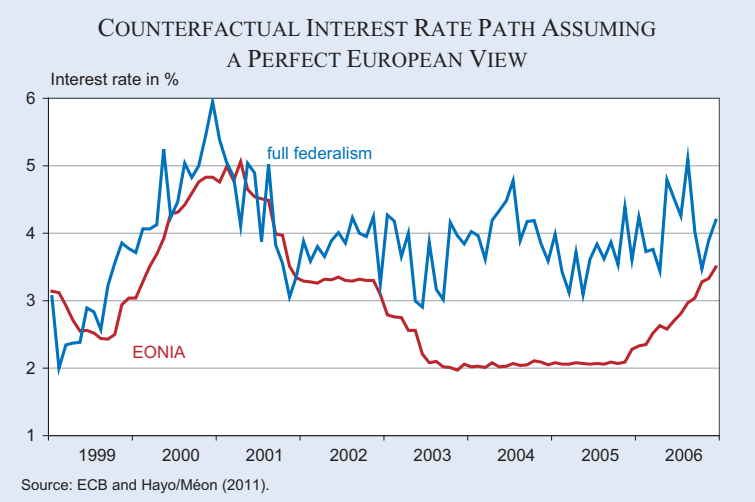
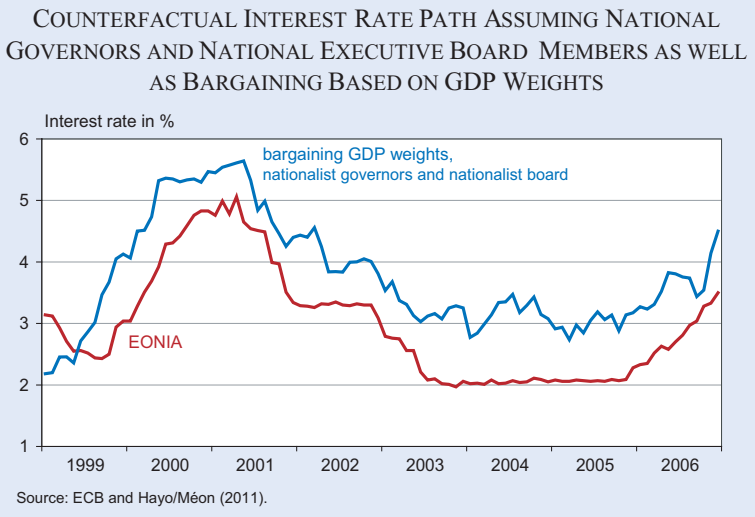


Figure 4



Figures 3 and 4 compare two important scenarios with the actual interest rate (Eonia). In Figure 3, the simulated interest rates obtained under a perfectly "federal" or European view are shown. In that scenario, all the members of the Governing Council are assumed to pursue a purely European monetary policy. Figure 4 shows the counterfactual interest rate path based on a bargaining scenario, where members of the Executive Board as well as national governors negotiate interest rates. Negotiations take into account the relative economic power, as measured by the respective country's share in the GDP of the Eurosystem.

Both simulations show the characteristics already mentioned in the discussion of Figure 2, namely that European interest rates were below the values recommended by a Taylor rule. However, clear differences appear. In Figure 3, while the simulated and actual rates are relatively close together in the earlier part of the sample, they diverge markedly from mid- 2003 onwards. At the end of the sample, another convergence takes place. In Figure 4, although the fit between simulated and actual series is not quite as tight during the early part of the sample, important turning points of the Eonia are well captured. Although there is still a difference between both series, the phase of decreasing interest rates in 2002–03 corresponds very nicely as well as the increase from the end of 2005 onwards

The conclusions based on the analysis of the figures holds up when using a variety of criteria, for instance correlation between the series, persistence and reaction of Eonia to changes in counterfactual target rates. Thus, our results robustly show that of all the scenarios we have considered, the best performing is the one in which individual members follow national objectives, bargain over the interest rate, and their weights in the negotiation are based on their country's share of the zone's GDP.

Thus, there is more than casual evidence that European monetary policy is affected by regional concerns and that decision-making in the Governing Council does not necessarily follow a one country, one vote principle. Taking these concerns seriously would imply that the current and planned ECB decision-making framework may not be optimal and should be adjusted to reflect these circumstances.

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Supranationalism in Monetary Policy Decision-Making

Harald Badinger*

Volker Nitsch**

Central bank designs vary considerably around the world. Central banks differ, for instance, in their degree of institutional independence, their range of tasks and competencies, the size, composition and voting procedures of their decision-making bodies, and their communication and transparency policies. In view of the large differences in various organizational details of central banks, a growing body of literature aims to identify what can perhaps be described as best practice in central banking.

The European Central Bank (ECB) deviates from the majority of central banks in various respects. An obvious example is the size of the monetary policy decision-making body, the ECB's Governing Council, which currently consists of the six members of the Executive Board plus the governors of the national central banks of the 17 euro area countries. A council size of 23 (voting) members is clearly at the upper end of the distribution; most of the 82 central banks surveyed by Fry et al. (2000) operate a monetary policy committee with about 5-10 members. Another notable difference concerns the composition of the Council. Only few central banks require that decision-makers have a specific regional background; in the ECB's Governing Council, by contrast, the majority of seats are allocated by country, with each euro area member country having exactly one representative.

When the ECB was established, many of these features of central bank design were probably chosen for good reason. The membership size of the Governing Council, for instance, can perhaps be justified by the size and heterogeneity of the economic area; Berger, Nitsch, and Lybek (2008) find that larger and more heterogeneous countries tend to have larger central bank boards. Having (at least) one representative from each member country in the Governing Council also seems to increase the central bank's credibility since it allows the council to communicate central bank decisions directly to the national public in each country in its native language.

After more than a decade in existence, however, it has become increasingly clear that some design features of the ECB are potentially problematic, because they strongly rely on the unrealistic assumption of an 'ideal' central banker (often accompanied by a hypothetical role model of a European policy-maker). The most critical assumption for the current organizational structure of the ECB is that all ECB-related decisions by central bankers and politicians are made with a purely European (or, more precisely, euro area-wide) perspective in mind. As the ECB (2004, p. 12) itself describes its procedures: "Monetary policy decisions in the euro area must be based on a euro area perspective. [...] When taking decisions, the members of the Governing Council do not act as national representatives but in a fully independent, personal capacity." If such benevolent behavior were indeed the case, the national background of ECB Governing Council members would be irrelevant, both for appointment and decision-making.

In practice, however, as will be argued below, it is obviously illusionary to expect that individuals (even central bankers) are completely ignorant as to their personal background, experiences and influences. As a result, national representation may, in fact, matter a great deal. This insight, if true, is of particular importance since the basic idea of national independence (and effective supranationalism) motivates a number of other critical (in fact, often unique) organizational features of the ECB.

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Features of ECB design based on supranationalism

To illustrate this point, we consider the following four aspects of central bank design in turn: the membership size of the decision-making body, the taking of votes, the publication of votes and the weighting of votes.

A sizable body of literature examines the costs and benefits of small and large committees. While it is generally agreed that committees make better decisions than individuals, the exact number of members on the committee basically reflects a trade-off: on the one hand, a larger committee should be better able to process, analyse, and interpret large amounts of economic information; on the other hand, as the number of board members increases, the exchange of ideas becomes more complicated and the power of an individual to influence decisions (and, thus, his/her incentives to prepare for discussions) decreases. In fact, Berger and Nitsch (2011) estimate that monetary policy committees with an intermediate size of five to nine members have shown the best performance in the past.

The hypothesis of a supranational European central banker now seems to imply that the costs of increasing membership size are limited since all council members look at the same type of (euro area aggregate) data. Enlargement of the euro area, although potentially increasing diversity, hardly affects averages from economic data and, thus, does not necessarily lengthen discussions within the circle.[1] As a result, the benefits of admitting new national central bank governors to the council were initially viewed to outweigh the costs. In 2003, only a few years after the establishment of the ECB, a rotation model for voting rights was adopted, although this has not yet been implemented.[2]

The idea of 'taking a European perspective' has also led to some obviously distorted views and practices regarding decision-making in committees, with the ECB sending, for a long time, an artificial signal of consensus. Basically all central bank laws include a rule on voting procedures. In this respect, the ECB is no exception. Article 10 of the Statute of the ECB stipulates that: "The right to vote shall be exercised in person. [...] Save as otherwise provided for in this Statute, the Governing Council shall act by a simple majority of the members having a voting right. In the event of a tie, the President shall have the casting vote."[3]

Initially, however, the ECB did not even implement the simplest measure of individual accountability in decision-making, the taking of votes. As the first President of the ECB, Wim Duisenberg, explains (Barber, 1999): "I won't say that there never will be a vote, but in such a discussion, when it comes to a specific proposal, a consensus emerges over time. A consensus doesn't indicate in all cases that, if there had been a vote, it would have been unanimous. But if you see in a circle of [then] 17 people that there is a very large majority moving in the same direction, then nobody asks for a vote." Although it is not publicly known whether and when this procedure was changed, Duisenberg's successor as President, Jean-Claude Trichet, has long insisted that the Governing Council is a consensual body, in which members basically share similar views. Trichet's frequent claim that "we are a team" has become legendary in this context.

When no votes are taken at the meetings, voting records can also not be made public. However, whether votes are published or not is, in principle, a conscious design decision. For example, the Federal Reserve, the Bank of England, and the Bank of Japan, among others, release detailed minutes of the monetary policy meeting, including individual voting records. The ECB, in contrast, has decided to refrain from this form of transparency. Specifically, it is argued that this opacity helps to ensure supranationalism. Since members are likely to be associated with their country of origin by the public, the fear is that publishing votes may invite pressures by national politicians or interest groups. As the ECB's inaugural chief economist Otmar Issing (1999, p. 513) puts it: "Members of a committee with a clearly defined mandate should concentrate on making their individual best judgement and their best contribution to the collective decision-making process. Anything that focuses attention on personalities or nationalities, rather than on issues, is likely to distract from this task, to encourage attempts to 'play to the gallery' and thus, ultimately, to compromise

[1] In contrast, regional quotas (i.e., an assignment of seats by regional background) are typically adopted in order to explicitly allow for different regional perspectives.
[2] In 2008, the Governing Council decided to postpone the start of the rotation system until the date on which the number of governors exceeds 18; see ECB Decision ECB/2008/29, available at http://www.ecb.int/ecb/legal/pdf/l_00320090107en00040005.pdf.

[3] Available at http://www.ecb.int/ecb/legal/pdf/en_statute_from_c_11520080509en02010328.pdf.

personal independence." This reasoning, however, is again based on the implicit assumption that Council members always act fully according to mandate. If, in contrast, voting behavior is (partly) colored by national frames of reference, the argument completely turns around. Since no public assessment of individual voting behavior is possible, votes may be shaped in strong disproportion by national considerations. In the extreme, this intransparency may lead to situations in which council members themselves make their votes public (especially if they take a minority position).

As a final example of potential difficulties associated with supranationalism, we briefly discuss the weighting of votes in the ECB. For decisions on monetary policy, the ECB applies a 'one member, one vote' rule.[4] While this procedure offers some (mainly) practical advantages (e.g., by allowing easy determination of a quorum and majority, and giving the President the casting vote in case of a tie), the crucial assumption behind this decision rule is that nationality is irrelevant for decision-making. Since all Council members have the same mandate, weighting of votes by nationality seems to be unnecessary. As soon as this assumption is violated, however, the rule becomes highly problematic, since countries are heavily misrepresented. More generally, it seems hard to understand why nationality matters (often decisively) for appointment, but then becomes completely irrelevant immediately after appointment.

Does regional background matter for decision-making?

Yet, is supranationalism, the common belief of committee members on an overarching goal, indeed an illusion? Are votes influenced by the personal background of a decision-maker (including the decision-maker's regional affiliation)? There is not only strong direct and indirect empirical evidence pointing in this direction, European policy-makers also seem to be sensitive to this issue, often eagerly seeking to place national candidates in the ECB's Executive Board.

The most convincing piece of evidence is probably provided by analyses that examine individual voting records in central banks with regional quotas. Since there are few such constellations, most research focuses on the United States. These studies often strongly conclude that members of the Federal Open Market Committee are influenced by economic conditions in the regions that they represent; see, for instance, Gildea (1992), Meade and Sheets (2005), and Chappell, McGregor and Vermilyea (2008). In similar fashion, Berger and De Haan (2002) analyze individual voting behavior in the Bundesbank Council (Zentralbankrat), in which all German state central banks held voting rights, over the period from 1948-1961, finding that the probability of dissent voting is partly explained by regional economic developments. In sum, the assumption that an individual's regional background is irrelevant for decision-making has no firm basis in the data. Policy preferences of members of the ECB Governing Council, especially national central bank governors who live and work in their home country, are likely to be affected by local conditions.[5]

The role of lower management levels for decision-making

Finally, in Badinger and Nitsch (2011), we highlight the importance of national representation in the management of the ECB. Specifically, the paper builds on a recent literature in management science which analyzes corporate design, organizational hierarchies, and the functions of top executives (such as CEOs), board, and firm management in general. This literature typically emphasizes the effects of individuals in organizations. For instance, Bertrand and Schoar (2003) note that executives from earlier birth cohorts seem to be more conservative on average, while managers with an MBA degree tend to follow more aggressive strategies. For corporate boards, Schwartz-Ziv and Weisbach (2011) find that board activity chiefly involves supervising management, with board members often being presented with a clear recommendation as to which proposal the CEO/management preferred.

In Badinger and Nitsch (2011), we focus on the composition of the ECB management team below the Governing Council. Analysing the nationality of

[4] Article 10 of the Statute of the ECB describes two deviations from this rule. Firstly, for decisions concerning the capital of the ECB, the votes shall be weighted by the capital subscription key (with zero weight for Executive Board members). Secondly, once the rotation model is established, the number of governors with a voting right will be restricted to 15, with voting rights being assigned on a rotating basis.

[5] Euro area-wide indicators may nevertheless have a larger weight for decision-making; see Chappell, McGregor and Vermilyea (2008). Hayo and Méon (2011) provide interesting evidence for the ECB.

over 200 individuals who have been appointed to a management position since the establishment of the ECB, we ask whether country features matter for employment? We also search for evidence of networks among staff members along national lines. Finally, we examine whether the national composition of central bank staff has a measurable impact on policy-making.

In contrast to the principle of equal representation among national central bank governors in the Governing Council, we find that the national share of managers in the ECB varies strongly from country to country. A sizable fraction of the observed variation is, not surprisingly, explained by country size; countries with a larger capital share in the ECB and (often) a larger staff size at the national central bank tend to have more representatives in the management of the ECB, possibly reflecting a greater supply of able central bankers. Moreover, membership in the euro area is positively associated with shares of national representation, although the association becomes weaker as the management level declines. Interestingly, for the core business areas of the ECB, membership in the euro area seems to be an important precondition for appointment, while knowledge of the German language is less relevant than in the full sample.[6]

To explore the possible existence of national networks in the ECB, we analyse whether national presence at top management levels also affects national representation at lower management levels. While it could be argued that, following appointment of a new top executive, nationals of other countries are targeted for lower-level positions in order to achieve broad geographical representation within a given business area, nationals at the top level may also act as a door-opener for fellow nationals. Specifically, given that in the day-to-day business, personal interaction is often crucially important, there may be even a tendency to select subordinates who share the same language and culture. In our empirical analysis, we indeed find consistent evidence for the networks hypothesis; strong national representation at a particular management level is typically associated with similarly strong national presence at the subordinate management layer.

In a final exercise, we examine the association between national representation in the ECB's top management and monetary policy decision-making. To analyse this issue, we estimate Taylor-type interest rate rules; Taylor rules specify the nominal interest rate as a function of inflation and the output gap and are typically found to describe actual monetary policy reasonably well. For the ECB, we now make use of the fact that monetary policy is targeted at the euro area, such that the key macroeconomic variables of interest are weighted averages of national data from euro area member countries. As a result, we are able to compute euro area aggregates and estimate corresponding Taylor rules, based on alternative weighting schemes for national data. More precisely, it is argued that if monetary policy is directed more strongly towards the macroeconomic conditions in countries that are well represented in the ECB management, Taylor rule specifications that use national representation as weights to aggregate national data should provide a superior empirical fit than the default specification based on economic weights. Based on this approach, monetary policy decisions seem to be most closely linked to national representation in the core business areas of the ECB. Our estimates indicate that the ECB's interest-rate setting behavior is best described by a Taylor rule that uses national representation weights in the management of the ECB's key business units.

Policy conclusions

The decision rules of the ECB crucially depend on the assumption of supranationalism. In other words, the voting behavior of members of the Governing Council is exclusively shaped by their mandate and remains completely unaffected by local conditions. In practice, however, a sizable body of literature suggests that this assumption is seriously flawed.

As a solution, the asymmetry in the treatment of nationality for appointment and decision-making in the ECB should be reduced. A possible option to achieve this goal is to make national background irrelevant for membership of the Governing Council, as there is no need to have a committee that includes a national representative from each euro area member country. In terms of its implementation, this solution may imply strengthening the

[6] The ECB has defined as its core business areas: Banknotes; Economics; Financial Stability; International and European Relations; Legal Services; Market Operations; Payments and Market Infrastructure; Research; Statistics; the Target2-Securities Program; and the ECB Permanent Representation in Washington, DC. Supporting business areas are: Counsel to the Executive Board; Administration; Communications; Human Resources, Budget and Organization; Information Systems; Internal Audit and Secretariat and Language Services. See http://www.ecb.int/ecb/educational/facts/orga/html/or_005.en.html.

power of the Executive Board. Another option is to accept the importance of national background to decision-making and to weight votes accordingly. This rule could be implemented immediately since a similar procedure already applies to other ECB policy decisions.

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The European Central bank in (the) crisis

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Introduction

Since the eruption of the sovereign debt crisis in the euro area in May 2010, the ECB (or for that matter Eurosystem) has been in the spotlight of crisis management and resolution. Less attention has been paid to the impact of the crisis on the ECB itself. It is often argued or assumed that the sovereign debt crisis is the result of flaws in the framework of the euro.

This article takes another perspective. We begin by analysing the nature of the sovereign debt crisis, then discuss how the crisis has affected the functioning of the ECB and the euro, and how the ECB was forced to respond and evaluate the choices it made in formulating a response. Finally, we focus on the future and the challenges that lie ahead.

The nature of the sovereign debt crisis

The crisis was triggered by three different developments. The first was lack of discipline in the management of government spending and revenues. This was the case in Greece. The second was a gradual and continuous erosion of competitiveness, which was again the case in Greece, but also in Portugal and Italy. That led to structurally low economic growth, which subsequently threatened the sustainability of government debt. One could also make the same point by arguing that these countries have never fully adjusted to the requirements of the Single Market. Finally, the financial crisis of 2007-2008 had a very strong impact on the banking sector in some countries. Governments offered support to their banks in order to avoid a collapse of the financial system, which weakened government budgets and increased government debt. This negative impact was reinforced by the deep recession of 2009, which caused a sharp decline in government revenues. In countries like Ireland, and to a lesser degree Spain, this became a threat to fiscal sustainability.

The fiscal sustainability crises in individual countries became a threat to financial stability in the euro area, because of high financial integration in the euro area and due to (the threat of) contagion. High financial integration was reflected in the fact that, in many cases, a high proportion of the government debt of euro area countries is held outside the country concerned. Doubts about the sustainability of debt of a certain country therefore have an immediate impact on the solvency of banks across the euro area. The discussion about private sector involvement in the case of Greece and as an element in the functioning of the European Stability Mechanism (ESM) enormously reinforced the potential and actual spillover effects between countries and between government instability and financial sector instability.

What about the euro and the ECB? The main objective of setting up the ECB was to maintain price stability in the euro area as a whole. The ECB has so far been very successful in achieving its main objective: since the introduction of the euro inflation has on average been around 2%. That is lower than the average outcome for Germany in the era of the Bundesbank, and lower than in many other advanced countries around the world. The ECB has also succeeded in becoming a very highly respected central bank in the international arena. Therefore, the euro as such and the ECB are not the problem.

It is more a question of the sovereign debt crisis affecting the euro and the ECB through two channels. The first channel (discussed above) is the creation of (potential) financial instability in the euro area. This is an issue for the ECB because one of its tasks is to contribute to the financial stability policies of the competent authorities without prejudice in terms of maintaining price stability.

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The second channel is even more fundamental from the perspective of the euro, because it affects the conditions for the existence of the euro and the ECB's capacity to maintain price stability in the euro area. The so called convergence criteria are fundamental to the existence of the euro and the possibility of running a single monetary policy for the euro area. These criteria should not only be fulfilled as a condition for introducing the euro and for entering the euro area at the moment of entry, but should be complied with on a sustainable basis. The latter means that compliance must be ensured after adopting the euro.

This is where things have gone wrong. Let us first recall that the convergence criteria relate to government finance, long term interest rates, inflation and real exchange rates. In the year before the introduction of the euro it was realised that compliance with the government finance criteria after the introduction of the euro did require additional measures and procedures, so the Stability and Growth Pact was introduced. However, it is now abundantly clear that this Pact was not complied with and that government finance criteria are still not respected by many euro area countries.

The other criteria were more or less ignored. The interest rate criterion is closely related to the government finance criterion. At the moment, a number of euro area countries no longer fulfil this criterion, which specifies that long-term rates should not deviate by more than 200 basis points from the average long term rate of the three best performing countries in terms of inflation.

The relevance of the other two criteria after adoption of the euro was contested before the euro was introduced. It was argued that after adoption of the euro they would tend to be automatically fulfilled. This was underpinned by endogenous optimal currency area literature (Frankel and Rose 1998). The assumed mechanism was that, in the absence of the exchange rate as an adjustment escape mechanism, structural reforms would be triggered that would lead to automatic convergence of inflation and competitiveness. Not everybody agreed and there were coordination mechanisms for economic policies introduced in the governance of the EU and euro area. However, they were weak and they could not prevent non-compliance with the criteria cited above over time. It can also be concluded that the endogenous optimal currency area theory has been convincingly falsified.

Consequences for the euro, the ECB and the ECB's response

All in all, the sovereign debt crisis means that the fundaments of the euro have been eroded and that the possibility for implementing a single monetary policy in the euro area has been significantly reduced in principle. In practice, this was hidden to a certain extent in a way by the deep recession that followed the financial crisis. As a result, very loose monetary policy was appropriate everywhere, although this is hopefully not a structural situation.

Nevertheless, the ECB was immediately thrown into the spotlight after the sovereign debt crisis hit in May 2010. There were three aspects to its responsibilities: future prevention, crisis resolution and crisis management. In future prevention and final crisis resolution, the ECB can only offer its analysis and views. The responsibility is in the hands of the politicians. These are not areas that put pressure on the (cohesion of) the ECB Governing Council's decision-making. All Council members have a similar interest, although they may somewhat disagree on the precise content of the measures to be taken. We will later argue that the impact on the single monetary policy of the crisis resolution may again cause strains within the Governing Council. Initially, however, resolving the crisis is a matter for the governments of the euro area. It is in the area of crisis management that the ECB and the cohesion of its Governing Council was quickly put to test. During the Greek sovereign debt crisis market turbulence increased to high levels and interest differentials against Germany went up sharply.

The ECB identified the underlying cause as excessive deficits and debts, but was also aware that there was no immediate remedy available at a government level. The EFSF (the European Financial Stability Facility, the emergency fund) had not yet been created and it was going to take time to negotiate a programme for Greece.

The Securities Markets Programme

The ECB Governing Council found itself in uncharted territory. For the first time it had to take a decision on whether and how to intervene in government debt markets. This was, of course, no ordinary monetary policy decision. It could even be debated whether the decision was indeed a monetary policy decision, or whether it was about supporting finan-

cial stability measures taken by governments. The fact that intervention could be seen as being directed against market turbulence and that reference is made to financial stability in the EFSF could have been an argument for grounding intervention in financial stability considerations. In the end, however, the monetary policy argument for intervention was used. With hindsight it can be argued that a financial stability based intervention would have had the advantage of perhaps making it easier to immediately transfer the bonds purchased in the context of the interventions to the EFSF when that fund was finally ready. A disadvantage for the ECB would have been that, according to the Maastricht Treaty, monetary policy decisions can be made in complete independence, while supporting financial stability is a secondary task.

As we have seen above, monetary policy was indeed impacted by the sovereign debt crisis. Spreads became higher in some markets than allowed by the convergence criterion on long-term interest rates. The ECB argued that the Securities Markets Programme (SMP) in the context of which it started to buy government debt in the secondary market, aimed to facilitate the homogenous transmission of monetary policy.

However, this was not a straightforward argument. The Treaty is clear on the fact that the ECB is not allowed to buy government bonds in the primary market. It does not forbid such purchases in the secondary market, but the ECB had developed the view that such buying should be limited so as not to circumvent the rule of not buying in the primary market. Was the SMP consistent with (the spirit of) the no bail out clause? Whatever the case is legally, it must be taken into account that the ECB had to decide and operate in an environment where some EMU rules had been clearly violated, i.e. the convergence criteria. So it had to operate in an environment where the foundations for the single monetary policy had been damaged. In other words, the ECB had to make choices and operate in a world where the rules of the game were not respected.

There was also a substantive argument against the SMP. By buying government bonds the ECB would relieve market pressure on the governments concerned to consolidate and adjust. This is the argument of induced moral hazard and why the ECB stressed the temporary nature of all of its so called unconventional measures and thus also of the SMP.

In the popular press there were also voices that said that the SMP would be inflationary. That is why the ECB decided to sterilise SMP purchases on a weekly basis. This was a communication devise rather than anything else. It is worth remembering that the ECB implemented full allotment by as early as the end of 2008. This meant that the monetary base was demand-determined, whether the ECB sterilised or not. Moreover, since there is no mechanical relation between the monetary base, M3 and inflation, avoiding an inflationary impact from the SMP can never be ensured by sterilising the purchases. However, in practice, there was no worrisome increase in the growth of M3, which remained very modest.

It became rapidly clear that the decision to set up the SMP was contested within the ECB Governing Council. Axel Weber made his opposition public and later it became also clear that Jürgen Stark had never been in favour. Other Council members did not say in public that they were against the SMP, although there were rumours that some other members from traditional hard currency countries started to feel very uneasy with it after a while too. In any case, this was not good for the credibility of the ECB, which until the introduction of the SMP, had built a reputation of very effectively handling the financial crisis.

The SMP was meant to be temporary, but governments did not take sufficient measures to end the market turbulence or to make it possible for the ECB to (gradually) exit the programme. There was a period beginning in spring last year when tensions in the markets became smaller. The size of the SMP more or less started to stabilise at around 70-75 billion euro and started to look like it would die quietly, until the crisis flared up again when Spain, and later Italy, came under pressure. A very rapid increase in the size of the SMP to well above 200 billion euro was the result. The SMP purchases only came down when the ECB under its new President Mario Draghi announced two three year LTROs with full allotment (see below).

The SMP not only affected the homogeneity of the Governing Council, it also strained the relations between governments and the ECB. The ECB became increasingly annoyed with governments for not taking measures that went to the root of the crisis. As of May 2010 a “muddling through” scenario developed. The ECB had to continue to operate in very challenging situations and was also forced to

write letters to governments to force them to take consolidation measures and implement structural reforms as a condition for being prepared to purchase bonds. This is a very unpleasant and undesirable position for a central bank to be in. The central bank is independent, but in the longer term that can only be the case if it has a clear and limited mandate. Setting the fiscal policy of sovereign states is clearly not part of such a mandate. On the other hand, the ECB became hostage to governments who counted on it to intervene in markets when pressures mounted due to a lack of action on their part. Although formally that does not affect the independence of monetary policy, in practice it can be (seen as) a step in the direction of less independence and of substituting fiscal for monetary dominance.

Addicted banks

As a response to the financial crisis the ECB introduced full allotment of its refinancing operations at the end of 2008. This is perhaps the most important policy measure that the ECB had introduced before the sovereign debt crisis. As a byproduct of full allotment, a number of banks addicted to ECB credit had emerged. The purpose of full allotment was to provide funding to banks that could no longer rely on the professional funding markets, and the interbank market in particular, which almost completely dried up as a consequence of high uncertainty after the collapse of Lehman Brothers.

Full allotment turned out to be an effective instrument to alleviate market turbulence. However, it has proven a blunt instrument too (see also Hoogduin and Wierts 2012). Its purpose is to provide liquidity support, but it can also be a lifeline for banks that do not have a liquidity, but an underlying solvency problem. Restructuring or resolution of such banks is postponed and they continue to exist as so called dysfunctional Zombie banks in the financial system. It should be noted that the EU Commission has accepted this type of support to banks without demanding restructuring measures like it did in the crisis of 2008/2009. This raises important level playing field questions between euro area banks. Another result of full allotment can be that some banks take on additional ECB funding to take unwarranted risk or to continue to fund loans that are not profitable. That has the potential to create new Zombie banks and flatter the solvency of some firms.

The sovereign debt crisis and (the discussion about) private sector involvement caused a resurgence of uncertainty in markets and put additional stress on balance sheets in the financial sector. The more government debt of (potential) problem countries on the balance sheet, the greater the impact. As a result the amount of ECB funding increased. This was particularly the case in (potential) problem countries, since banks in these countries generally had the biggest problem in attracting funding. This also created an incentive to invest in own country government debt to be available as collateral for ECB funding.

As a result, not only did the ECB buy government debt through the SMP, but its exposure to the banking system of (potential) problem countries also rose, as did the collateral pledged by banks from these countries. Over time the government and the financial sector became increasingly interlinked. Banks started to hold a growing amount of government debt and the risk that governments had to support their banking systems increased with the weakening of the banks' balance sheets.

Generally speaking, the Eurosystem became the hub between the banks of (potential) problem countries and the banks of the other countries. This led to an increase in the size of the balance sheet of the national central banks. In the (potential) problem countries, credits to banks increased; and on the liability side so did the so called Target 2 balances. In the other countries Target 2 balances increased on the asset side while deposits of banks in their country rose on the liability side. This reflects the fact that the euro area money market no longer functions and has been taken over by the central bank (see Sinn and Wollmershauser 2011 for a comprehensive analysis). As long as the euro area remains intact, claims via Target 2 do not pose a problem. In case of one or more countries leaving the euro area there is at least uncertainty as to whether these claims will be (fully) honoured. They can therefore be seen as a tail risk.

The main problem is the exposure of individual banks or banking systems, which is far higher than would have been possible under the normal allotment system (flexible rate tenders with a minimum bid rate). An exit from the full allotment to the normal system is not on the horizon, but has become an even trickier issue than it already was. The situation became even more serious after the adoption of new unconventional measures at the end of last year. They are the subject of the next section

The different situations of countries in the euro area makes it more difficult than in normal times for Governing Council members to strictly focus on the euro area as a whole in their decision making.

Three year LTROs and collateral measures

When problems mounted again towards the end of last year there was apparently resistance in the Governing Council to accelerating and increasing purchases of government bonds under the SMP. The new President of the Bundesbank Jens Weidmann even argued in public that this would not be compatible with the Treaty. The point was made by the Governing Council in the person of President Draghi that governments first had to adopt a so called fiscal compact, which would minimise the risk of similar problems in the future (Draghi 2011).

After governments had announced that they would negotiate such a fiscal compact in the form of an intergouvernmental treaty, the majority of the Governing Council was apparently prepared to take action. However, resistance by some against increasing the SMP further had not disappeared. It should be noted that in Germany in particular there was also broad and strong opposition outside the Bundesbank to the SMP.

The ECB then surprised everybody by announcing two long-term refinancing operations (LTROs) with a 3 year maturity and full allotment (against collateral). It also allowed seven national central banks to accept a wider range of collateral against ECB refinancing operations (Draghi 2012). These combined measures led to a liquidity injection in the banking sector of over 1000 billion Euro. The above mentioned problems of full allotment were magnified in the process. The collateral measures contributed to a further fragmentation of the euro area money market.

It is surprising that the ECB announced two LTROs. Why not just announce one and wait for the result? Why a maturity of three years and not of one, as in the past? Why did the ECB not introduce a cap to remain in control of its own balance sheet? The reason is probably that the ECB wanted to "shock and awe". That put a premium on more and on longer maturities than the market had become used to in the meantime. It worked very well since market turbulence disappeared, the spreads of Spain and Italy came down and, more generally, the prices of risky assets increased.

However, since the ECB measures in themselves do not address the underlying problems of the sovereign debt crisis, it remains to be seen how permanent this market stability and higher risk appetite will turn out to be. If turbulence returns, there will probably be further demands for either additional LTROs and/or for the ECB to increase the size of the SMP. This will put further pressure on the homogeneity of decision making in the ECB.

We also wonder whether the ECB did not act too early by only asking for a fiscal compact. It would probably have been better to also ask for a sizable increase in the EFSF/ESM with euro area guarantees or resources as a condition for considering any additional ECB measures. In the end, the underlying problems are for governments to solve. Therefore, it might also have been made clear that any ECB action should be preceded by EFSF/ESM action after the emergency funds had been first increased sufficiently. By acting earlier the ECB has reduced pressure on euro area governments to decide on a sizable increase in the emergency funds. We would also have preferred a further increase in the SMP to that of the LTROs and collateral measures. The SMP addresses the problem of sovereign debt at its roots without involving the banking system and without causing the related spill over effects.

We do not agree with the point of view that this is not in line with the Treaty. As mentioned earlier, the ECB has the task of contributing to the financial stability policies of the competent authorities, as long as this does not conflict with maintaining price stability, which is its prime objective. There are no restrictions with respect to the timeframe or size of possible measures in this context, but they can never be automatic. In the context of the sovereign debt crisis, the ECB should continuously assess whether high interest rate spreads are the result of insufficient consolidation, or of unorderly markets. If the latter is the case, it is first up to the EFSF/ESM to intervene. If tensions do not abate even after such interventions, there is also room for the ECB to take action.

The challenges ahead and conclusion

The sovereign debt crisis has forced the ECB to take far-reaching, unconventional measures. The measures have been successful in calming down markets, but by their very nature they cannot solve the crisis. They can only buy time for governments to take the necessary measures to address the underlying problems.

The ECB has been put in a difficult position. The crisis has caused strains within the Governing Council. There are different views on the appropriate response to the crisis and, since countries are in different positions, it is more difficult for Council members to adopt a euro area, rather than a more national perspective.

The unconventional measures have negative side effects. They lead to a further segmentation of euro area financial markets and can, as such, be seen as a step towards renationalisation of monetary policy. They tend to create Zombie banks and thereby run the risk of creating a financial system that is not fully functional. It is therefore of the utmost importance that the ECB makes a plan to bring these measures to an end in an orderly fashion. That will not be easy. If it moves too early, it may create serious financial instability. If it moves too late, inflation may go up significantly. It should be noted that financial stability is a necessary condition for price stability in the longer term; and that price stability is a necessary condition for financial stability.

The greatest challenge is probably due to the fact that not all countries of the euro area currently fulfil the convergence criteria; and this will probably the case for quite a number of years to come. Fiscal consolidation and restoring competitiveness in particular take time.

What is needed in the next decade or so is a renewed convergence process. Unlike the convergence process leading to the introduction of the euro, this process must be completed by countries that have already adopted the euro. Letting countries temporarily leave the euro area is an option in theory, but not one that should be pursued. It would permanently change the nature of EMU from a currency union to a system with fixed, but adjustable exchange rates. Apart from the political issues involved, we know that fixed but adjustable exchange rate regimes are unstable.

Different necessities and speeds of fiscal consolidation mean that the business cycle conditions will probably be quite different between countries that make a strong fiscal consolidation effort and the rest. Countries can restore competitiveness through different types of measures. Some of these measures are not related to the price of their goods and services (non-price competitiveness), but others put a downward pressure on the price level.

It is inevitable that the convergence efforts of the countries that have to consolidate their public finances and that have to improve competitiveness have a deflationary impact on euro area growth and inflation. This leads to an old question in a new context: should inflation below 2% in converging countries be compensated for by inflation above 2% in the rest; or should the objective be to keep inflation close to, but below 2% in the countries that meet the inflation convergence criterion?

In our view, in setting its monetary policy the ECB should not take into account the downward pressure on the euro area price level and inflation as a result of convergence efforts in a number of euro area countries. If it were to do this, countries like Germany would pay an intransparant and not democratically sanctioned compensation to the countries in convergence by accepting higher inflation. On top of that, countries like Germany would be at risk of generating asset price bubbles as a result of having excessively low interest rates for too long.

Therefore, a change in the ECB monetary policy strategy is required for the period of the convergence process. The ECB should continuously assess the impact of convergence measures on the inflation outlook for the euro area as a whole. Its objective in the years ahead should be to keep euro area inflation corrected for the impact of convergence measures below, but close to 2%.

This will definitely make monetary policy more complicated and there is also a risk of it becoming less transparent. The latter risk should be addressed by publishing the methodology for correcting the euro area inflation rate for the impact of convergence measures. Having a more complicated monetary policy (strategy) is the lesser evil. Therefore, it is urgent for the ECB Governing Council to take up this issue. It is urgent, because first signs of the current interest rate being too low for Germany are emerging. House prices, for example, have recently increased by 5.5% on an annual basis in twenty German cities.

The question of whether and how countries that go through a convergence process should be supported is a political one. It is inevitable that adjustment is costly. There are motives for the other countries to be prepared to offer support. It is also in their interest that countries convergence. It would make a single monetary policy less complicated, as we have seen. Moreover, a stable Southern Europe is also

important for the political and economic stability of the rest of the euro area. Finally, solidarity with fellow Europeans could be an argument for providing support.

If it were decided to offer support, this should not take the form of monetary policy or of expansionary budgetary policy. Support can take the form of technical assistance, financing the adjustment process for a rather long time and/or at favourable interest rates, promoting private investment from the rest of the euro area in the countries concerned, directing more EU structural funds to the countries in convergence and/or increasing the size of such funds, etc.

Finally, it should be noted that an improvement in the competitiveness of Southern European countries will have implications for other countries. In itself it will lead to an increase in imports from and a decrease in exports to these countries. This implies a fall in economic activity in these countries. Sometimes it is argued that these countries have to run more expansionary budgetary policies to compensate for this fall in activity. We do not agree and see this as a non sequitur. What it does imply is that the economies in these countries should be flexible enough to substitute other private activity for the fall in activity resulting from the convergence process in Southern Europe.

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The Impact of the Economic Crisis on Migration and Labour Market Outcomes of Immigrants in OECD Countries[1]

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Thomas Liebig*

Introduction

Not long ago, many OECD countries were looking to labour migration as one way to address labour shortages, and the expected declines in the working-age population as a result of ageing. High levels of migration were being recorded in the new migration countries of southern Europe and more widely in the European Economic Area following EU enlargement. In the year immediately prior to the crisis, a record-high level of almost 5 million migrants had entered OECD countries.

Although the labour market impact of the recent economic downturn differed significantly across countries, both in terms of intensity and of the type of workers most affected, labour demand fell in all countries. Many of the countries that were hardest-hit during the downturn had been among the main recipient countries of migration flows immediately prior to the crisis.

Against this background, this article looks at the impact of the crisis on migration flows and the labour market integration of immigrants in OECD countries. It begins by describing how migrants have fared in the labour market during the economic crisis, followed by an analysis of the impact on labour migration trends and their link with recent policy changes. It concludes and draws some implications for the management of labour migration and for integration policy.

How have migrants fared during the economic crisis ?

The financial crisis, which started at the end of 2007, rapidly led to a major recession and has resulted in severe labour market slack. Starting from a 28-year low of 5.8% in late 2007, the OECD unemployment rate rose to 8.8% in the fourth quarter of 2009, which translates into 18 million more unemployed persons (OECD, 2010). Although the crisis did not hit all labour markets evenly, the labour market was strongly affected in several countries, notably in Spain, Ireland and Greece – three countries which had seen large inflows of migrants immediately prior to the crisis. Recent evidence suggests that unemployment may have peaked at the end of 2009, but job creation remains weak in most OECD countries.

In 2008 and 2010, the unemployment rate of the foreign-born increased by 14 percentage points in Spain and by about nine percentage points in Ireland and Iceland (Figure 1). In the United States, the number of unemployed immigrants increased by over one million and the unemployment rate of immigrants more than doubled from a low 4.2% (second quarter of 2007) to a high 11.4% (first quarter 2010). Milder increases were recorded in EU countries as well as in Australia and Canada, although in all cases except in the United Kingdom, the immigrant unemployment rate has increased more rapidly than that of native-born inhabitants. On average in the EU-15, between the first three quarters of 2008 and the corresponding quarters in 2009, the unemployment rate of migrants increased by 3.4 percentage points, twice the increase recorded for native-born inhabitants.

Overall trends in labour market outcomes of immigrants mask important differences between different migrant groups. In terms of gender, in previous crises the labour market impact tended to be similar for

[1] The views expressed in this paper are those of the authors and do not necessarily reflect those of the OECD or of the governments of its member countries.

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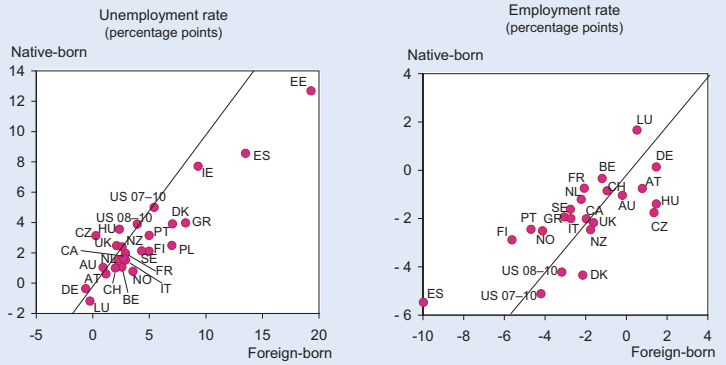
Figure 1

CHANGE IN UNEMPLOYMENT AND EMPLOYMENT RATES BY PLACE OF BIRTH BETWEEN 2008 AND 2010



Note: Data for EU countries refer to changes between Q1-3 2008 and Q1-3 2010. Data for the United States refer to changes between 2007 and 2010 (US 07-10) and between 2008 and 2010 (US 08-10). Data for Australia, Canada and New Zealand refer to changes between 2008 and 2010.

Source: OECD (2011).

men and women. This has not been the case in the current crisis, as employment losses were disproportionally large for men.

Factors explaining this situation can be found in the distribution of employment among migrants by gender. Women are more concentrated in sectors related to social and household services which still experienced employment growth during the crisis in many countries, whereas men are overrepresented in the most deeply-affected sectors (construction, manufacturing, finance). In addition, in several OECD countries the labour market participation rate of migrant women increased during the crisis, probably to compensate for potential income losses on the part of their spouses.

Young migrants have been particularly exposed to the worsening of economic conditions. Except in countries with low initial levels of youth employment, such as Greece, Belgium and France, in all countries where the labour market has been seriously hit by the crisis. In Ireland, for example, the employment rate of young migrants aged 15-24 fell by 24 percentage points. On average in European OECD countries, in the third quarter of 2010, almost 24.5% of young migrants were unemployed, compared with 19.6% of the young native-born. Corresponding figures for Canada (19.4% vs. 14.2%), Australia (12.9% vs. 11.3%) and New Zealand (19.9% vs. 16.4%) show a similar picture. The situation is, however, different in the United States, where the unemployment rate of young migrants was 15.8%, compared with 18.8% for young native-born. As of the third quarter of 2010, the highest unemployment rates recorded for young immigrants were observed in Spain (44%), Sweden (35%), Belgium (35%) and France (33%).

In Europe (2008-10) and the United States (2007-10), the most severe job losses were recorded in the construction sector, with declines in employment of 1.6 million and 2 million, respectively. Immigrants accounted for about a fourth of the decline in Europe and over a third in the United States. The financial sector was also hard hit. In the United States, more than 135,000 jobs were lost in this sector between 2007 and 2010 among immigrants. In total, about 330,000 jobs were lost in the motor-vehicle industry in Europe, including 58,000 among immigrants; while in the United States the transportation equipment manufacturing industry alone lost 386,000 jobs between 2008 and 2009, including 53,000 held by immigrants. [2]

The higher vulnerability of migrants during economic downturns is primarily due to the concentration of migrant workers in sectors with more volatile employment. All else being equal, the initial distribution of foreign-born employment explains about 60% of the drop in foreign-born employment in Spain, 75% in Ireland, 80% in Sweden, 50% in the Netherlands, but only 30% in France.

Another possible explanation is linked to the fact that immigrants have on average less secure contractual arrangements and are more often in temporary jobs, which are the first to be cut during an economic downturn. The difference in the risk of job loss between temporary and permanent workers is large, especially since employers often start to adjust their labour demand by not renewing temporary contracts during the initial phase of a recession. The opposite phenomenon can be identified during the initial phases of a recovery. In most OECD countries, immigrants are overrepresented in temporary jobs

[2] Not all industries have reduced their activity in the last three years and employment indeed increased in many sectors. This is especially the case in the social services. In the United States, foreign-born employment in education services increased by 5% (+63 thousand) between 2007 and 2010, whereas it increased by 8% (+80 thousand) in Europe in the past three years. In the health sector, foreign-born employment increased by 130 thousand in the United States (including +20 thousand in hospitals) and by more than 200 thousand in Europe (including + 150 thousand in residential care activities).

(Table 1). This is notably the case in Belgium, the Czech Republic, Greece, Norway, Portugal, Spain and the United Kingdom, where the share of immigrants in temporary employment exceeded that of the native-born by at least 50% prior to the crisis. In Spain, almost 48% of all migrant workers in 2008 were on temporary contracts. Not surprisingly, migrant employment has adjusted very rapidly.

Migrants also tend to have lower seniority in the jobs they occupy, making them more prone to be laid-off. However, independent of seniority, migrant workers may also be subject to selective lay-offs when economic conditions are less favourable. Evidence of hiring discrimination on racial and ethnic grounds is supported by numerous studies applied to a wide range of OECD countries (OECD, 2008), but much less analysis has, been carried out on selective lay-offs. Two specific Swedish studies, however, identify a significant and strong effect of place of birth on unemployment risk. Controlling for education, seniority and sector, Arai and Vilhelmsson (2004) show that during the early 1990s economic crisis, non-European immigrants faced an unemployment risk that was twice as large as that of natives. This was the case despite the fact that the Swedish Security of Employment Act stipulates that the order of dismissals in case of layoffs should be based on seniority.

Immigrants may also be more disadvantaged in the hiring process during a crisis. For example, when there is an abundance of job applicants, (real or expected) mastery of the host-country language may be used more extensively as a screening criterion by employers.

How has the economic crisis impacted migration flows?

Reactions in migration policies and discretionary labour migration

Prior to the economic crisis, several general migration policy trends could be observed across the OECD, favouring highly skilled and student migration and moving towards demand-driven migration systems.[3] Many OECD countries were also developing policies aimed at using labour migration to help meet the specific demands of the labour market, and these mechanisms, especially shortage lists, have been changed in reaction to the changing economic environment.

Table 1

Share of different types of employment in total employment by place of birth (15-64 years old), 2008, percentage

	Temporary employment		Recent employment (tenure <12 months)	
	Native-born	Foreign-born	Native-born	Foreign-born
Austria	9.0	9.4	12.9	20.4
Belgium	7.6	13.5	11.0	17.2
Canada	12.4	10.8	-	-
Czech Republic	7.1	14.3	9.4	12.9
Germany	14.4	16.2	13.1	17.8
Denmark	8.2	10.3	22.3	28.6
Spain	25.7	47.7	15.4	34.1
Finland	15.3	19.7	17.6	28.4
France	14.1	15.7	11.7	14.1
United Kingdom	4.8	8.2	15.8	22.3
Greece	10.6	16.5	7.8	12.7
Hungary	7.7	9.1	12.2	12.8
Ireland	7.9	10.5	14.2	27.3
Italy	13.2	15.8	10.5	16.3
Luxembourg	7.1	5.5	7.8	9.7
Netherlands	19.9	25.2	9.0	11.7
Norway	8.8	13.2	17.7	22.2
Portugal	21.6	36.3	11.5	18.9
Sweden	15.5	21.2	16.2	19.4

Source OECD (2010)

During the crisis, a number of OECD countries have made adjustments to their labour migration management policies. Depending on the main characteristics of labour migration programmes, the levers that policy makers can use to adjust inflows to the changing conditions in the labour market include: i) adjusting numerical limits; ii) strengthening the labour market test; iii) limiting possibilities to change status and to renew permits; iv) applying supplementary conditions to non-discretionary flows; and v) promoting return migration. While not all of these changes have been directly related to the economic crisis, many were explicitly developed to deal

[3] Demand driven" refers to migration that is conditional to an offer of employment. "Supply-driven" migration refers to migration independent of a specific job offer by an employer.

with fewer employment opportunities available and to better ensure that international recruitment met labour demand.

Numerical limits have been cut, most markedly in Italy, which did not authorise any labour migration in 2009, after setting the maximum at 170,000 in 2007. Korea also cut its cap in 2009 and again in 2010, from 72,000 to 34,000 and then 24,000. Spain uses a cap for anonymous recruitment from abroad that was slashed from over 15,000 in 2008 to less than 200 in 2010.

The traditional settlement countries in the OECD set targets for permanent inflows which are not, or only indirectly, set in response to immediate labour market needs and specific requests by employers. These targets were only slightly adjusted during the downturn. Canada lowered its target for economic migrants by less than 2% for the FY2008/09, but raised it for 2010 by 8.3%. In Australia, the target for the permanent skilled migration programme was reduced from 133,500 to 108,100 in 2009, but rose to 113,850 in 2010 (and again in 2011 to 125,850).

The labour market test is a requirement that jobs be offered first to domestic workers (including resident migrants) before recruiting from abroad, and usually involves an advertising requirement for a minimum duration of time. As unemployment rises and the labour market slackens, it tends to be easier to find workers locally – and authorities may treat employer requests for recruitment from abroad more sceptically. In 2009, Canada imposed a stricter review of requests for low-skilled temporary workers. The Czech Republic and Poland also moved to examine requests more closely. The United Kingdom, Korea and Bulgaria doubled the length of time a job offer must be listed locally, which was also increased by Ireland.

In most countries where so-called "shortage lists" exempt certain occupations in shortage from labour market tests, sharp reductions in the lists were made. The United Kingdom repeatedly cut back its shortage occupation list, as did Spain. In October 2009, it eliminated a third of the occupations from the list, and these accounted for the bulk of employment previously on the list. Ireland also cut back the list for its "Green Card" for skilled permanent migrants, while Canada and the Czech Republic both eliminated their shortage list for temporary foreign worker requests.

The policy changes mentioned above have been linked to the worsening economic situation, but it is not clear how much they have affected labour migration flows, as the main brake on labour migration flows was the fall in labour demand in the first place.

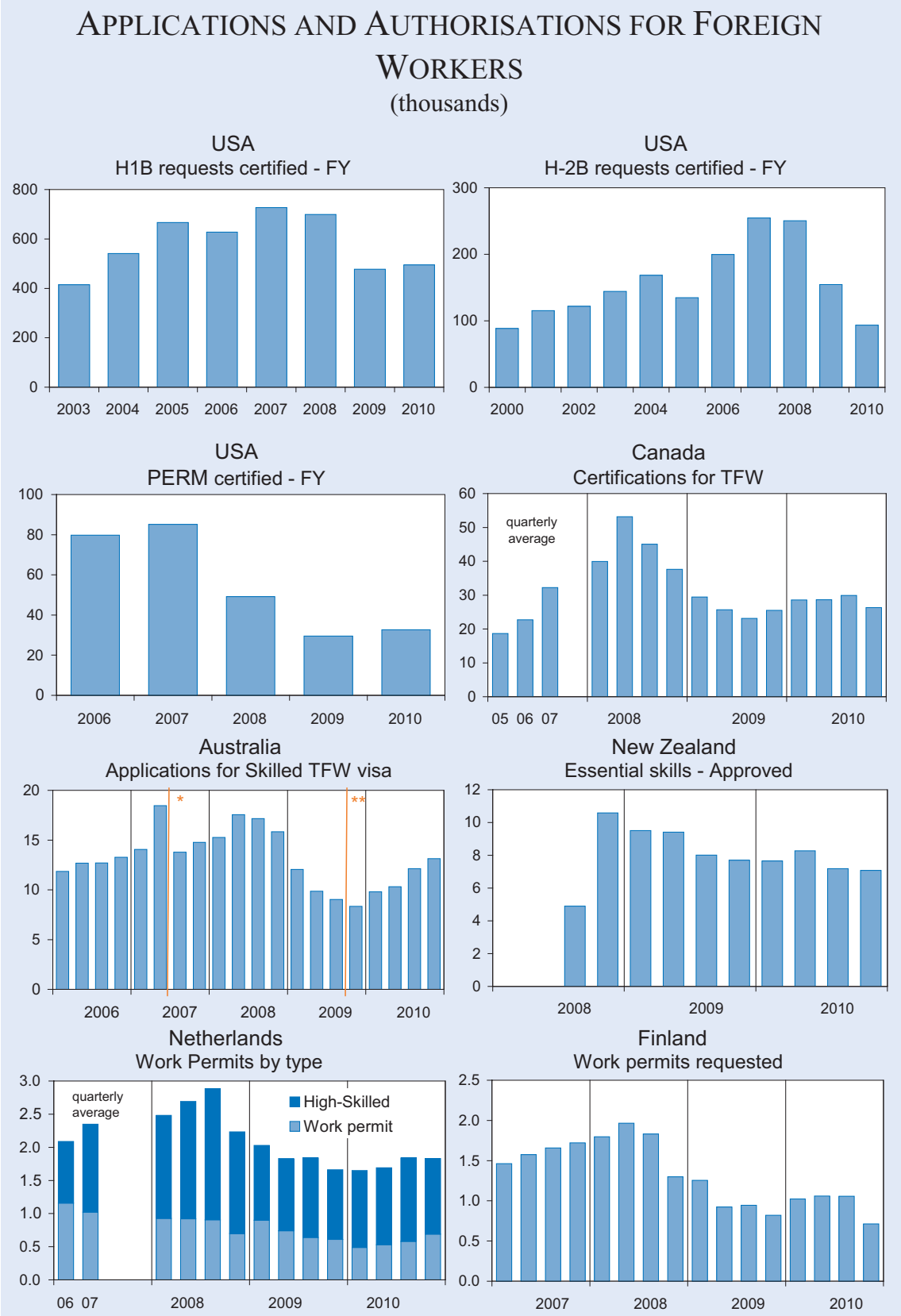
This is evident in the number of applications for authorisation to hire a worker from abroad in a number of OECD countries, although the slack labour market did not begin to be felt in many countries until mid-2008 or even later (Figure 2). For 2009, most OECD countries showed clear indicators of falling demand, in terms of both the number of requests for foreign workers (in countries for which application numbers are available) and the number of foreign workers authorised.

In the United States, two separate indicators show lower demand for foreign workers: the number of applications for authorisation ("certification") and the time before the available visas are exhausted. Requests for certification for permanent visas ("Green Cards") fell from 99,000 to 38,000 between 2007 and 2009, with little recovery in 2010. The number of positions certified under the H-1B programme for skilled workers fell 35%, from 727,000 to 477,000 from 2007 to 2009, without recovering in 2010. Requests for computer-related occupations, which represent the largest category, fell by 41%. The number of positions certified under the H-2B program, open to non-agricultural temporary workers, fell from 255,000 to 154,000 over the same period, and further to 94,000 in 2010. A large part of the decline was in landscaping, tree planting, hospitality and construction occupations.

In Canada, quarterly authorisations of temporary foreign workers following a labour market opinion peaked in the second quarter of 2008 and fell – by 57% –until the third quarter of 2009, before stabilising in 2010. The steepest declines were seen in hospitality and construction. In Australia, monthly applications for temporary skilled workers peaked in June 2008, before falling 62% by October 2009. Applications picked up again in 2010, but remained below the 2008 levels. In the Netherlands, applications for work permits were down 38% in 2009 compared with 2006, and did not start to recover until the second quarter of 2010, remaining below their pre-crisis level.

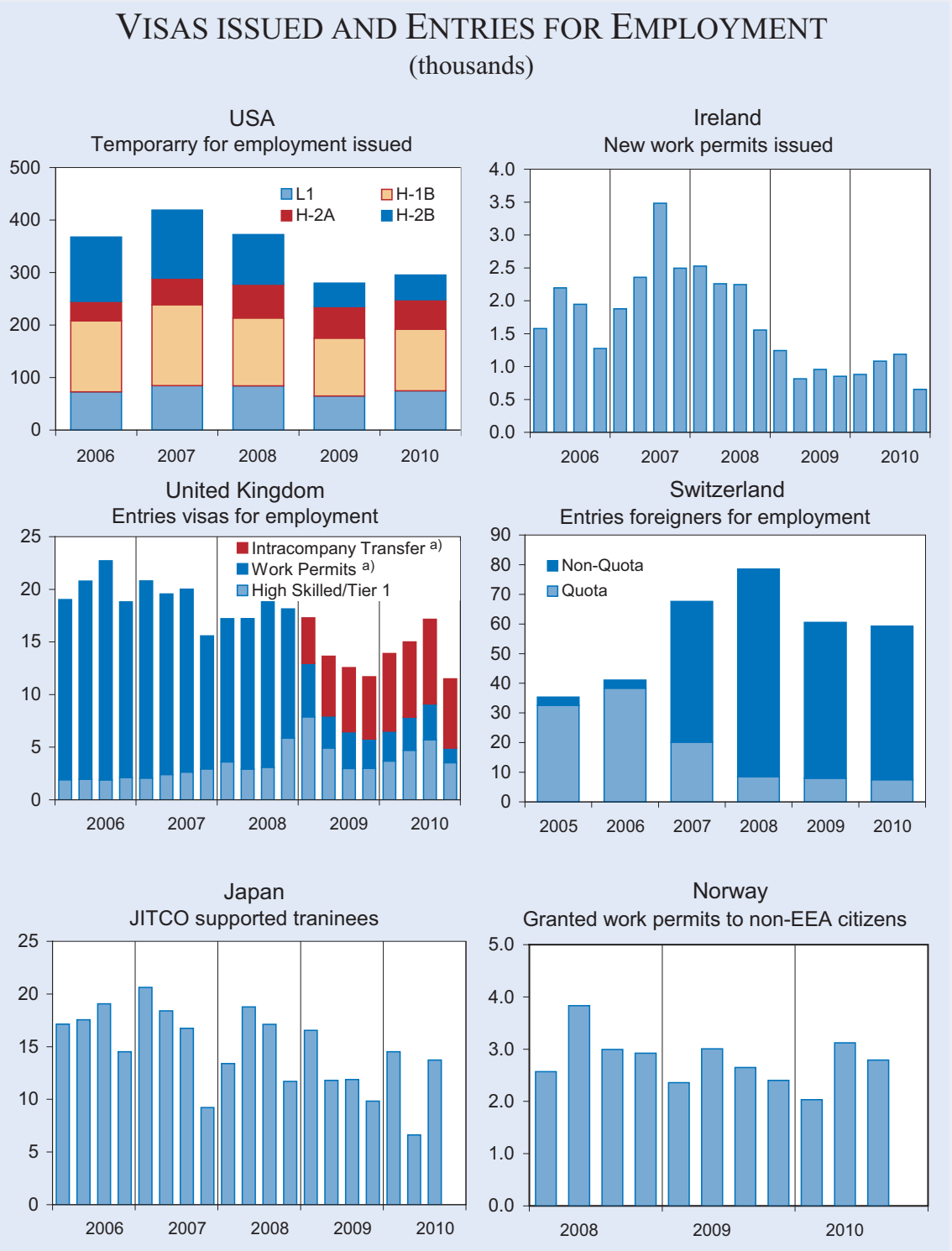
Lower employer demand translated into fewer actual entries for employment in most OECD countries

Figure 2



Note: Policy changes in Australia affected application levels. Stricter English language requirements imposed in 2007 (*) and the migration legislation amendment (work protection act) was implemented in 2009 (**).
Source: USA: Department of Labor; CAN: Human Resources Canada; Australia: Ministry of Immigration; New Zealand: Department of Immigration; Netherlands: Ministry of Justice; Finland: Immigration Service.

Figure 3



Note: a) Prior to 2009, no distinction was made in the United Kingdom between work permits for intra-company transfers and others.

Source: USA: DHS; Ireland: Department of Enterprise, Trade and Innovation; UK: Border and Immigration Authority; Japan: Japanese Industrial Training Corporation; Norway: Directorate of Immigration; Iceland: Ministry of Labour.

(Figure 3). Those countries struck earliest and hardest by the crisis saw some of the most significant decreases. In Spain, labour migration under the general regime fell from over 200,000 in 2007, to 137,000 in 2008 and less than 16,000 in 2009. The first quarter of 2010 saw fewer than 2,000 entries. The number of participants in the Spanish seasonal work programme fell even further: from 65,000 in 2007 and 41,300 in 2008 to just 3,600 in 2009. This drop occurred against the background of a fall of only 3% in agricultural production and employment, suggesting that Spaniards and resident foreigners returned to agricultural work as other job opportunities disappeared. However, seasonal agricultural programmes have been stable or even increasing in Germany, the United States, Canada, New Zealand, and most other OECD countries with a programme in place, except for Italy.

Ireland saw a drop in the number of work permits issued to non-EEA citizens. By early 2009, the number stabilised at about one-third of its 2007 peak level. In Switzerland, labour migration fell by about 25% between the end of 2007 and the end of 2009, and remained at that level in 2010.

In the United Kingdom, where labour migration from outside the EU is limited to skilled workers, the number of visas issued for employment under its Tier 2 programme (employer-driven and labour-market tested) was more than 35% lower in 2009 than in the previous year. In contrast, the number of entries under the Tier 1 programme for the highest skilled – who do not require a prior job offer – have been more resistant to the crisis. Recent policy changes, however, almost closed this channel of entry in the United Kingdom.

In Norway, where non-EU immigration is limited to the highly-skilled, the number of entries for employment from outside the EU remained steady. Similar trends were observed for the highly-skilled for example in Denmark or France. In Germany, which liberalised its labour migration policy in spite of the crisis, inflows of highly-skilled migrants rose significantly by 24% between 2008 and 2009, albeit from a low baseline of 17,000, in part due to more changes of status by graduating students.

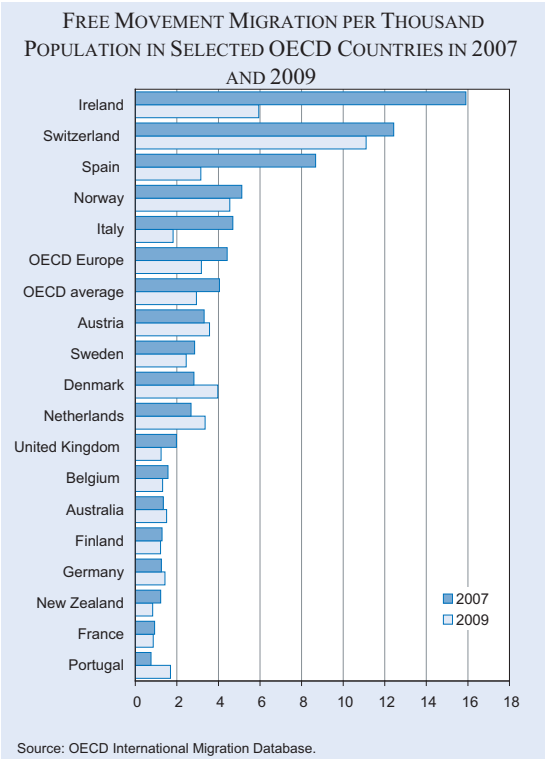
More generally, even steep declines in GDP and rises in unemployment do not mean the end of all demand-driven labour migration. In many cases, this kind of migration was already limited to the highly-skilled workers in short supply, and employers still struggle to find such workers even in a slack labour market. Employers may also be reluctant to withdraw applications for hiring high-skilled foreign workers that have already been filed prior to the downturn and for whom they have already incurred recruitment costs.

Free movement migration

A large share of migration in OECD-Europe prior to the crisis resulted from free movement, following the expansion of the European Union in 2004 and 2007 and, in the case of Switzerland, bilateral agreements with the EU and its member countries. In the midst of the economic crisis, it became apparent that free-movement migration and temporary labour migration outside of free mobility regulations were the types of flows most affected by the decline in the demand for workers. Within free-mobility areas, costs of migration are lower and information about job opportunities is readily available, in principle making migration more reactive to changing conditions.

While free movement went down by about one third on average over OECD-Europe, not all countries were affected evenly. The decline was particularly strong in Ireland, Spain, Italy and, to a lesser degree,

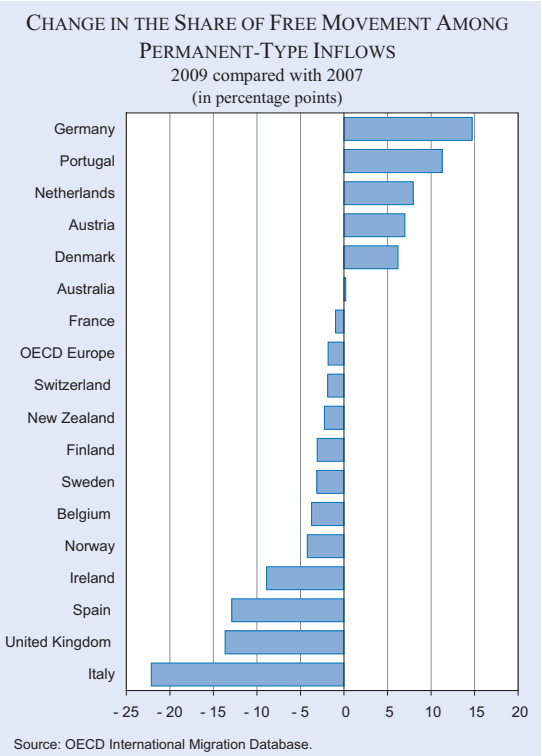
Figure 4



in the United Kingdom (see Figure 4). These countries had seen large inflows of nationals from the EU-8+2, particularly from Poland in the case of Ireland and the United Kingdom, as well as from Romania in the case of Italy and Spain.[4]

The average decline in free mobility and discretionary labour migration flows was a driving factor of a general drop in overall migration by 5% in 2008 and 7% in 2009. However, in OECD-Europe on average the share of free movement among total permanent-type flows declined only a little (Figure 5). Nevertheless, the picture is not uniform across countries. While there have been strong declines in relative terms in Italy, the United Kingdom, Spain and Ireland, the share of free mobility among total permanent migration actually increased in Germany, Portugal, the Netherlands, Austria and Denmark. Among these, Germany and Austria had at the time not fully opened their labour markets to nationals from the countries that joined the European Union in 2004.

Figure 5



[4] The declines in free mobility flows recorded for Italy and Spain between 2007 and 2009 were largely due to an exceptionally high number of Romanian and Bulgarian citizens reported in 2007 upon accession.

It is important to note that free mobility is not entirely employment-based, and one reason why flows have not declined even more strongly along with labour demand is the fact that family and other components of free mobility migration may have remained at roughly the same level or even increased during the crisis. One example is Sweden, where inflows from the EU-27/EFTA for employment declined from 2006 to 2009. During the same period, however, inflows of EU-27/EFTA citizens for other reasons – largely family and study – remained constant.

Conclusion

The crisis has posed a significant test to the responsiveness of existing migration policies, one which so far they have passed rather well. Where adjustments were needed in the hardest-hit countries, existing policy instruments were enough to adapt to changing labour demand. No major policy reversals or legislative overhauls occurred in reaction to the crisis.

The crisis did not bring migration to a halt. Incentives to migrate remain, and family and humanitarian migration – which together still account for the majority of migration flows in many countries – are less affected by economic conditions. What is clear is that labour migration has fallen sharply, especially lesser skilled and temporary labour migration, as well as free movements. Overall, migration flows show significant inertia, and expectations that deteriorating labour market conditions would produce a drop in immigrant populations have thus far proven to be unfounded.

One effect that lower labour migration flows have – whether driven by reductions in labour demand or by more restrictive policies – is to change the composition of total migration flows, away from migration for employment towards migration categories which are associated with lower labour market outcomes, at least initially after arrival. The compositional effect, compounded with the worsening outcomes for immigrants during an economic downturn, makes it likely that employment outcomes for recent immigrants in the near term will worsen before they improve. In addition, there is a risk of a "scarring effect" on the employment prospects of the many migrants who arrived just prior to or during the downturn who did not get a foothold in the labour market. Immigrant youth, long-term unemployed immigrants, and new arrivals all represent

particularly vulnerable groups. At a time when budget constraints are tighter than ever before, delaying or cutting back on integration measures would have negative long-term implications for the integration of immigrants and social cohesion.

The likelihood of a slow and gradual recovery also raises the question of how to adapt migration policies over the coming years, knowing that the crisis has contributed to creating a labour reserve. Finding the right balance between active labour market policy and recruitment policy in this context will be a challenge.

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The Crime – Immigration Nexus: Evidence from Recent Research[1]

Brian Bell* and Stephen Machin**

Introduction

Economists have long discussed the labour market impact of immigration on natives. In this context, the concern of the public, policymakers and academics has been on whether immigrant inflows harm the wage and employment prospects of natives and if so, whether policy restrictions on such inflows would be legitimate. This concern has received substantial, and sometimes controversial, attention in the academic labour economics literature (see, inter alia, Borjas, 1999, or Card, 2005, 2009). Yet this research debate has largely ignored other potential channels through which immigrants may potentially alter the well-being of natives – either positively or negatively. Possible channels include the demand for health and education services, the impact on housing and transportation, neighbourhood segregation and the effect on cultural diversity and crime. In this paper, we focus on this last channel, studying what economic research has to say about the crime-immigration nexus.

There is now a small body of economics literature on the links between immigration and crime, though this is changing rapidly with a flurry of research contributions emerging in this area. There is already a substantially more developed body of literature in sociology that tends to focus on studies of crime and migrant stocks within neighbourhoods of particular cities and examines the extent to which social disorganisation resulting from immigration leads to increased crime. There is much less focus in this literature on the aggregate macro impacts. The lack of a large evidence base is somewhat surprising given that the economic and social costs of crime are usually estimated to be large, so any link between immigration and crime should be of significant concern to researchers and to policymakers alike.

In this paper, we begin by examining some opinion poll evidence across a group of advanced countries on attitudes to immigration and views on the impact of immigration on society. This highlights the much broader concerns that the public have over immigration than are the usual focus of study of economists. We then review the new empirical evidence that has begun to emerge from economists on crime and immigration. We focus on studies that offer more plausible identification strategies and highlight the role that labour market opportunities appear to play on the impact of immigration on crime. The importance of such opportunities follows naturally from the orthodox economic model of crime developed by Becker (1968) and Ehrlich (1973). Recall that in these models, individuals rationally choose between criminal and legal activity by comparing the expected utility from each. In addition to the probability of being caught and the consequent punishment, the key driver in these models is the difference between potential legal earnings in the labour market and the returns to crime. All else equal, individuals with poor labour market opportunities and attachment are more likely to be involved in criminal activity. Most of the evidence we review suggests that there are unlikely to be major aggregate impacts of immigration on overall crime. However, there do appear to be negative impacts from specific subgroups of immigrants, who have poor labour market outcomes, on property crime rates. Finally, we examine cross-country data on imprisonment rates between natives and foreigners. These data present something of a puzzle given the findings on the overall crime-immigration link, since for a range of countries there appears to be a substantially higher imprisonment rate for foreigners than natives. We document this fact and suggest some possible interpretations.

[1] This review paper draws heavily upon some of our other papers in this area, notably Bell, Fasani and Machin (2010) and Bell and Machin (2012).

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Public Attitudes to Immigration

How does public opinion view the potential impacts of immigration? To examine this, we exploit a large cross-country survey conducted by Transatlantic Trends. The survey was conducted in 2010 and covered the United States, Canada, United Kingdom, France, Germany, Italy, Spain and the Netherlands with approximately 1,000 adults interviewed in each country.

In Table 1, we report the percentage of respondents in each country who strongly or somewhat agreed with statements concerning the impact of legal immigrants on various aspects of economic and social life in the host country. In the first rows, we examine whether the public think immigrants have effects on the labour market. Interestingly, clear majorities in all countries think that immigrants work hard and take jobs that natives do not want. Furthermore, the public has arguably no stronger view on the labour market impact of immigration than economists do. In most countries, the majority do not believe that immigrants take jobs away from natives, nor do they believe that immigrants reduce native wages. That said, however, respondents in the US and UK are substantially more likely to view immigrants in a negative light in terms of labour market outcomes for natives.

Turning to social outcomes, in general the majority do not accept that immigrants burden social services or increase crime. However, there are very sizeable minorities in many countries who believe there are more negative effects of immigration along these dimensions. For example, of the eight countries in the survey, three (Germany, Italy and the Netherlands) clearly believe that the deleterious impact of immigrants on crime is more significant than potential labour market effects on natives. Finally, there is a general acceptance that immigrants enrich the cultural life of the host country. Unsurprisingly, if the questions focus on *illegal* immigrants rather than *legal* immigrants, respondents take a much more negative view of their impact on the host country. Thus, a majority in all countries except Canada believe that illegal immigrants increase crime.

The evidence is intriguing. It appears that the potential labour market effects of legal immigration are no more troubling to voters than the possible impact on social services or increased crime. Yet the academic research is heavily focused on the first aspect. Partly this simply reflects the comparative advantage of economists. However, it does suggest that the field of study has been unnecessarily narrowed and a richer picture of the effects of immigration on host countries must incorporate other avenues. This is especially true for policymakers designing any system of immigration control.

The Evidence Base on Crime and Immigration

There are a number of approaches that have been followed to try and tease out the links between immigration and crime and in what follows we focus on the body of research that uses, to our minds, the most convincing identification strategy. Perhaps unsurprisingly, this involves the same methodological approach as that predominantly used in the literature on the wage impacts of immigration – namely exploiting changes in the spatial distribution of immigrants over time.

The typical approach adopted in these studies is to use panel data that tracks crime rates in the same areas over time, relating them to immigrant stocks in an equation specified for area i in year t as:

$$C_{it} = \alpha_i + \beta_1 M_{it} + \beta_2 X_{it} + T_t + \epsilon_{it} \quad (1)$$

where C is the crime rate, M is the immigrant stock, X denotes area control variables, T denotes a set of time dummies and ϵ is an error term. An area fixed effect, α, is included (so as to control for time-invariant characteristics of areas).

This kind of equation can then be expressed in changes (so as to transform out the spatial fixed effects) in a model that looks at the effect of cross-area changes in M on changes in C:

$$\Delta C_{it} = \beta_1 \Delta M_{it} + \beta_2 \Delta X_{it} + \Delta T_t + \Delta\epsilon_{it} \quad (2)$$

where Δ denotes a difference over time so that, in (2), the coefficient β_1 measures the empirical connection between changes in immigrant stocks and changes in crime across areas through time.

As in the wage-immigration literature, the key modelling challenge that arises in this approach is that these equations treat the immigration variable as exogenous. However, suppose that migrants chose locations based on their crime outcomes. Most obviously, suppose migrants chose areas with low crime

outcomes (we would, of course, expect natives to do the same, but migrants have arguably freer choice over location, particularly when they first arrive in a new country – in particular for more skilled migrants). Then we might observe a negative estimate of β_I. However, this would not demonstrate the causal effect of migrants on crime, but rather the selection effect of migrants based on crime. To deal with this problem requires an instrumental variable (IV) strategy. One needs a variable that is correlated with migrant location, but not with crime, that can act as a legitimate IV that identifies the causal impact of immigration on crime. Although not considered in this report, there is also the possibility that causation runs in the opposite direction, with rising crime in an area encouraging emigration, particularly for violent crimes.

The recent literature on the broader economic impact of immigration on receiving countries has generally addressed this identification issue by either devising suitable instruments (Altonji and Card, 1991; Card, 2001) or by exploiting some natural experiment where immigrants were forcibly allocated to areas they had not chosen (Damm, 2009; Edin et al., 2003). These kinds of approaches are also taken in the work in this area.

We review the findings from the five papers of which, as far as we know, report causal Instrumental Variable (IV) estimates using spatial panel data. The first of these, by Bell, Fasani and Machin (2010) (hereafter BFM), presents estimates of (2) for England and Wales over the period 2002 to 2009. They examine the impact on violent and property crime of two large immigrant flows that occurred over the period. The first was associated with a large increase in asylum seekers as a result of dislocations in many countries during the late 1990s and early 2000s (e.g. Iraq, Afghanistan, Somalia, Former Yugoslavia). The second flow resulted from the expansion of the European Union in 2004 to include Poland, Hungary, Czech Republic, Slovakia, Slovenia, Estonia, Latvia and Lithuania – the so-called A8. The UK decided to grant citizens from these countries immediate and unrestricted access to the UK labour market. BFM argue that tighter identification of the impact of immigration on crime can be achieved by focusing on these specific and large immigrant flows.

BFM pay close attention to the importance of instrumenting the migrant stocks to control for endogenous location choice. For the asylum wave, they make use of the dispersal policy adopted by the National Asylum Support Service (NASS) in 2001. From that date, individuals seeking asylum were dispersed to locations around the UK while their claim was being decided. The choice of locations was determined by the NASS with no reference to the wishes of the individual applicant. Thus, the dispersal policy itself can be used as an instrument to explain the locations of asylum seekers, assuming locations were not chosen as a result of correlation with crime shocks.

For the A8 wave, location choice is entirely up to the individual migrant. However, an extensive body of literature has established that the prior settlement pattern of migrants from the same national/ethnic group has a strong predictive effect on location choice of future migrants. Assuming that prior settlement patterns have no correlation with changes in current crime rates makes it possible to use the prior settlement pattern of A8 migrants across areas combined with aggregate A8 flow data to produce predicted A8 stocks for each area each year.

The causal estimates in BFM show there to be a detrimental effect of asylum seekers on property crime but, in contrast, the effect of the A8 wave on property crime is, if anything, in the opposite direction. There is no impact on violent crime. They estimates imply that a 1% point increase in the share of asylum seekers in the local population is associated with a rise of 1.09% in property crimes, while a similar rise in A8 migrants reduces property crime by 0.39%.

BFM then go on to interpret these results within the economic model of crime framework. The A8 migrants had strong attachment to the labour market and, indeed, that was the reason for their migration. Asylum seekers were, in general, prevented from seeking legal employment in the UK and the benefits paid to them were substantially less than the out-of-work benefits paid to natives. It thus seems unsurprising that there were different effects on property crime rates from the two waves. It should be noted, however, that in neither case were the effects quantitatively substantial, so most of the decline in property crime witnessed in the UK over the last decade was not related to immigration.

A second study by Bianchi, Buonanno and Pinotti (2008) examines the crime-immigration link across Italian provinces over the period 1990-2003. Fixed-effect estimates show that a 1% increase in the total

number of migrants is associated with a 0.1% increase in total crime. When the authors disaggregate across crime categories, they find the effect is strongest for property crimes, and in particular, for robberies and thefts. To account for endogenous location choice, the authors use a variant of the prior-settlement pattern instrument used by BFM for the A8 migrants. Again, the first-stage regression suggests that this is a strong predictor of migrant stocks across localities. The IV results show no significant effect of immigrant stocks on total crime, nor on the subset of property crimes. Thus, the causal effect of total immigration on crime is not significantly different from zero.

A third paper by Spenkuch (2011), uses panel data on US counties across the three census years 1980, 1990 and 2000. As with BFM and Bianchi et al, he also reports IV estimates using prior-settlement patterns to identify the crime-immigration relation. He finds generally positive and significant effects from immigrant stocks on property crime rates, but no such effect for violent crime. The estimated elasticity implies that a 10% increase in the share of immigrants would lead to an increase in the property crime rate of 1.2%. The IV estimates are broadly similar in magnitude, but are much less precisely estimated.

Spenkuch also breaks the immigrant stock into Mexicans and non-Mexicans. He argues that this allows him to explore whether the economic model of crime provides a useful guide to examining the impact of immigration on crime. We know that Mexicans tend to have significantly worse labour market outcomes relative to other immigrant groups in the United States and we might therefore expect a more substantial positive coefficient on Mexican immigrants in the property crime regression than for non-Mexican immigrants. This is, in fact, the case, with the coefficient being significantly positive for Mexican immigrants, while it is negative and insignificant for all other immigrants. Such a result complements the arguments of BFM that it makes sense to focus on particular immigrant groups in addition to estimating the overall impact of immigration on crime.

Alonso, Garoupa, Perera and Vazquez (2008) follow a similar approach for Spain. They have annual data on reported crime and convictions at the province level between 1999 and 2006. In addition to immigrant share in the population, they also include age, education and unemployment rates and the lagged crime rate as additional controls. Though they report IV estimates, their instruments (lagged values of the covariates and measures of the service share of GDP in a province) are not convincing in dealing with the endogeneity of migrant location choice. The authors find a significant, positive relationship between immigrant share and crime rates, even after controlling for socioeconomic and demographic characteristics of the province.

Finally, Butcher and Piehl (1998a) present evidence on the crime-immigration link across 43 cities in the United States over the period 1981-1990. Again they estimate (1) using a fixed-effect panel and various demographic and socioeconomic controls. Whether they focus on overall crime rates or the violent crime rate, the authors find no significant correlation between immigrant stocks in a city and crime. They also estimate an IV model using the initial share of immigrants in a city in 1979 to predict the decadal change in immigrant share that they then regress on the decadal change in crime. In spirit, this is similar to the IV strategy of BFM, though they do not use nationality-based settlement patterns that provide arguably stronger identification than aggregate immigrant shares. In addition, they have only 35 observations in this specification so it is difficult to provide convincingly strong statistical estimates. With these caveats in mind, however, their IV results show no effect of immigrant stocks on crime rates – indeed the estimated coefficient they report is negative, though not statistically significant.

So why are so many immigrants in prison?

A fair reading of the current empirical evidence from a range of countries is that the average effect of immigrants on overall crime rates is either zero or small. Studies that find a significant effect – either negative or positive – do so by focusing on a sub-set of migrants for which the relative rewards from criminal activity clearly differ from the average. It is perhaps surprising therefore that the relative rates of imprisonment for natives and foreigners often differ substantially within a country. In this section, we document this fact for a range of advanced economies, we discuss some of the data problems that bedevil such analysis, and then suggest some possible explanations and avenues for future research.

The OECD provides data on the share of foreigners in the total population and in the prison population

for a set of advanced economies in 2005. We select only those countries in which the shares of foreign-born and foreign-nationals in the total population are broadly similar as it is unclear in all cases which definition is used in the prison statistics (OECD, 2007). Figure 1 shows that for most countries, foreigners appear over-represented in the prison population. At the extreme, 71% of the prison population in Switzerland are foreigners, even though they account for only 23% of the total population. Only the United States appears to imprison foreigners at a lower rate than their share of the population, while the ratio for the United Kingdom is also toward the lower end of the spectrum.

The first key point to note is that these aggregate data compare natives with foreigners rather than immigrants. This raises two measurement issues. On the one hand, some immigrants will be counted as natives in these data since they will have become nationals of the host country. Secondly, some of those counted in the foreign nationals totals will not have been resident in the host country, but will have been arrested while on holiday or in transit. Consider for example the foreign drug smuggler caught at an international airport. Ideally we would like the imprisonment statistics to use the same definition of native and immigrant used in the economics literature, but these are generally not available.

One can think of three principal explanations for the high relative imprisonment rates experienced by foreigners. Firstly, natives and foreigners may have exactly the same chance of being caught and convicted of a particular crime, but foreigners commit types of crime that are more easily caught and/or more heavily punished. Secondly, the police exert more effort in capturing foreigners and/or the criminal justice system convicts and/or punishes foreigners more severely than natives for a given crime. Thirdly, foreigners simply commit more crime.

We can examine recent prison data from the United Kingdom to shed light on whether foreigners are more likely to commit offences with higher detection or sanction rates than natives. Table 2 documents the number of adults in prison by nationality and by offence type. Foreigners make up 13.7% of the prison population, compared to around 7.4% of the overall population. Interestingly, they account for only 11.0% of the convicted and sentenced prison population. The difference is accounted for by much higher rates of remand for foreigners i.e. being held in prison while awaiting trial. This may be a function of the flight risk of foreigners or the nature of the offence – defendants charged with offences likely to result in a substantial term of imprisonment if convicted are more likely to be remanded.

When we dig down into the type of offences for which individuals are imprisoned we see very stark differences between natives and foreigners. Recall that if natives and foreigners committed the same type of crimes and had equal conviction and sentence probabilities, we should see foreigners making around 11% of each offence category. However, as Table 1 demonstrates, this is very far from the picture. Foreigners are much more likely to be in prison for drug related offences and much less likely to have been convicted of robbery and burglary. But this crime mix does help to explain the over representation of foreigners in prison. Of those convicted, 64% are sentenced to a length of imprisonment of more than 3 years. However, for burglary – the least common crime type for foreign prisoners – only 45% receive such a sentence. In contrast, for drug crimes – the most common crime type for foreign prisoners – 72% receive such a sentence. So foreigners are convicted of types of crime that also involve more substantial imprisonment. At the same time, the detection rate for these crimes also differs substantially. Overall, 27.8% of crimes were detected in 2009; but burglary has a detection rate of only 12.7%, compared with a drug detection rate of 93.9%.[2] It does appear therefore that there are differences between natives and foreigners in the types of crime that they engage in and this is likely to feed through to differences in prison population rates as a result of differences in detection and sanctions across crime types. It is an interesting question as to whether such effects can explain the majority of the differences we observe in Figure 1. And if they can, this then raises the question of why the types of crime committed differ – we know of no substantive work on this issue.

To make progress on these issues requires underlying micro data on imprisonment. Butcher and Piehl (1998b, 2007) have examined US census data to analyse the relative incarceration rates of natives and immigrants. One difficulty with this analysis is that only the 1980 census allows for an exact identi-

[2] Of course, the drug detection rate should not really be compared here since almost no drug crimes would actually be reported to the police, since both sides of the criminal transaction are usually willing participants.

fication of imprisonment. Both the 1990 and 2000 census only identifies individuals in institutionalized group quarters – this includes prison, mental hospitals, care homes and other group quarters. In an attempt to mitigate the effect of this, Butcher and Piehl only focus on males aged 18-40. In the 1980 Census, 70% of this group that were institutionalized was in prison.

They find that immigrants were less likely than natives to be institutionalized. In 1990, 2.1% of the male population aged 18-40 were institutionalized. Among natives, the percentage was 2.2% while it was only 1.5% for immigrants. Furthermore, immigrants were much less likely to be institutionalized than native-born men with similar demographic characteristics. In addition, earlier immigrants were more likely to be institutionalized than more recent cohorts, suggesting an unfortunate assimilation effect as immigrants with longer time in the country approach the higher native incarceration rates.

The fact that recent immigrant cohorts into the US have lower incarceration rates than comparable natives is somewhat surprising since the literature on immigrant earnings tends to suggest that recent immigrants have worse permanent labour market characteristics than earlier immigrants. Butcher and Piehl (2007) suggest that immigrant self-selection may explain why, despite poor labour market outcomes, immigrants may have better incarceration outcomes. For example, perhaps those who have high illegal earnings in the source country decide to remain there rather than take the risk of developing capacities in a new legal environment. Alternatively, perhaps migration costs are correlated with success in multiple social dimensions (including criminality). Such hypotheses are, however, rather hard to test in practice and so a significant research challenge exists.

Conclusions

Overall, we conclude that there is little evidence that changes in total immigration within a country has a significant impact on crime rates, contrary to what some quarters of public opinion tend to stress. This conclusion mirrors the generally benign labour market effects that are estimated for immigrants. But it is important to recognise that immigrants from different source countries, and with different individual charac-

Table 1

Public Attitudes to Immigration, 2010

	US	CA	UK	FR	GE	IT	SP	NH
Labour Market Outcomes								
Hard Workers	89	84	77	53	61	60	58	70
Fill Jobs Natives do not want	65	68	68	54	67	73	72	70
Take Jobs from Natives	56	32	58	37	26	29	38	24
Reduce Native wages	52	30	52	42	38	44	52	23
Other Social Outcomes								
Burden on Social Services (Education/Health)	41	28	48	49	29	45	35	40
Increase Crime	**32**	**25**	**33**	**40**	**46**	**56**	**29**	**45**
Enriches Culture	60	60	45	58	60	49	55	59
Illegal Immigrants increase Crime	58	43	63	55	63	57	70	66

Notes: Figures are the percentage of respondents who strongly or somewhat agree with the statement regarding the impact of legal immigrants

Source: Transatlantic Trends – Immigration.

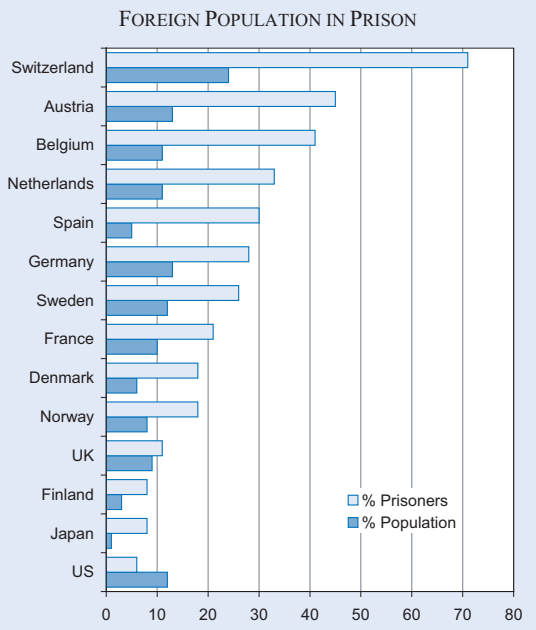
Table 2

Characteristics of the Native and Foreign Prison Population, UK 2009

	Total	Native	Foreign	Foreign as a % of Total
In Prison	83,454	71,231	11,350	13.7%
In Prison - Sentenced	68,488	60,716	7,502	11.0%
of which Males	64,993	57,961	6,884	10.6%
Males – Violence	19,108	17,487	1,587	8.3%
Males – Sexual Offences	7,918	7,021	881	11.1%
Males – Robbery	8,715	8,104	605	6.9%
Males – Burglary	7,678	7,371	292	3.8%
Males – Drugs	9,803	7,946	1,841	18.8%

Source: Data from Ministry of Justice Offender Management Caseload Statistics, 2009.

Figure 1



Note: % Prisoners shows the percentage of prisoners who are foreigners, while % Population shows the percentage of the population who are foreigners. If imprisonment rates were identical between foreigners and natives, the bars would be the same height within a country.

Source: OECD (2007).

teristics, are likely to be very different in their propensities to commit crime when they move to a new country. A series of papers that identifies the causal impact of immigration from spatial panel data is highly relevant to this observation, in that it tends to emphasise the labour market attachment and opportunities of different immigrant groups. Where attachment is low (e.g. asylum seekers in the UK) or labour market opportunities are poor (e.g. low wage migrants in the US), an impact on crime can be detected. On the other hand, when labour market attachment is strong no such crime impact can be found. These findings are in line with the way in which the orthodox economic model of crime can be used to think about possible immigration impacts on crime. Finally, for the most part, the causal findings from the spatial panel data studies that we focused on here tend to be backed up by research using other approaches that admittedly have weaker research designs with which to identify the crime-immigration relationship.[3]

The substantial cross-country variation in the relative imprisonment rates of natives and foreigners has received scant attention in the literature. This is partly due to data issues that often prevent a rigorous micro analysis of the prison population. However, the differences are so stark in many countries that it would seem a valuable direction for future research to understand the extent to which the findings discussed in this paper using crime and migration data are consistent with the imprisonment data.

[3] These comprise, for example, individual-level models of self-reported crime participation that include an immigrant dummy and cross-sectional spatial studies - see the review of Bell and Machin (2012) for more details.

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Temporary Employment in Italy

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Carlo Dell'Aringa* and
Marco Leonardi**

Introduction

Similarly to many European countries, Italy introduced labour market flexibility at the margin, by liberalizing the use of so-called flexible or temporary employment, without changing the employment protection legislation for standard regular workers. A large body of literature has claimed that a positive relationship exists between the growth of temporary workers and two-tier labour market reforms (e.g. Boeri, 2011). The European Commission (2010) reports that such a positive, albeit statistically weak, relationship exists. The OECD indicators for Employment Protection Legislation (EPL) group Italy with the countries which have largely reduced the EPL index for temporary workers (Venn, 2009), although Italy still exhibits an EPL index both for regular and temporary workers that is in line with the average EPL for the OECD area.

This paper offers an overview of the features of temporary employment in Italy. We start by briefly describing the institutional framework for temporary employment in Italy, and report some stylised facts on the diffusion of temporary workers over the last 15 years, with a special focus on the youth labour market. Next we look at transitions from temporary to permanent employment (i.e. the so-called stepping stone hypothesis), discuss the evidence on wage gaps between different types of employment contracts, and report some recent findings regarding the impact of temporary employment on firm productivity. We conclude by reviewing the current debate and policy proposals on temporary contracts and employment protection.

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Institutional framework

Italian employers may choose to utilize labour inputs under a variety of employment contracts. The most typical form of contract is the permanent one, which has no termination date and features the highest wedge between workers take-home gross pay and labour costs, caused by taxes and social security contributions. Depending upon firms' characteristics (mainly upon their size) these contracts are characterised by relatively stringent EPL and, consequently, high firing costs. A second type of contract is represented by fixed-term contracts. The only difference between these and their permanent counterparts is the presence of a fixed term, i.e. they can be renewed only once and can last altogether no more than three years in the same firm. All other working conditions such as wages, working times, pension rights and probationary period are identical to those of permanent contracts. Apprenticeships represent another form of temporary employment contract. Unlike fixed-term contracts, firms can use these contracts only for younger workers, for whom they must provide certified training and pay lower social security contributions. Workers under these three contracts are employees of the firm.

There exist other contractual arrangements through which firms can use the labour services of external workers. As in many other countries, there are temporary help agencies which supply labour services upon the payment of an agency fee. Additionally, and this is mostly an Italian peculiarity, firms can use collaboration contracts. These contractual arrangements have been in place since the early 1970s and were regulated again in 1997 and 2003. They provide a contractual framework for individuals who are not formally employed by the firm. Formally, these workers are self-employed, but often they are utilized by firms as normal employees. Thanks to a reduced regime of compulsory pension contributions and to lower labour costs compared to regular employees, many firms use them extensively. Finally, with the same intent of saving on labour costs, firms may simply outsource tasks to single individuals who act formally as external suppliers to the firm but actually have an exclusive relationship with the firm, thus being in all effects economically dependent on it.

Over the past 15 years the legislation on temporary employment has changed several times. The most important reforms of the legislation were:

1. Law no. 196/1997 (the so called "Treu-Package", named after the minister of labour at that time), which legalised temporary work agencies, regulated collaboration contracts and liberalised both apprenticeship and fixed-term contracts;
2. Law no. 30/2003 (the so called "Biagi Law", named after the professor of labour law and government consultant killed by terrorists), which introduced a number of new contracts into the national legislation, further regulated collaboration contracts and reformed apprenticeship contracts.

These institutional changes have greatly contributed to the spread of temporary employment in Italy, as we show in the next Section.

Stylised facts

In Figure 1 we plot the stock of temporary workers aged 15 to 24 since the mid-1990s. We use the definition of temporary workers adopted by the international institutions, which includes only those who are formally employed by firms. Vertical lines mark the two labour reforms of 1997 and 2003. In line with these reforms one can notice an increase in the stock of temporary contracts. As of 2010 the total number of temporary contracts is about 500,000 among those aged 15 to 24 (2.2 million in the whole labour force), and the vast majority of them are fixed-term contracts.

The widespread use of temporary contracts has a marked age profile, and is especially concentrated among the youngest segment of the labour market. As of 2010 temporary contracts have accounted for around 50 percent of the employed population aged 15-24. However, both the share of temporary employees in the employed population aged 15-24 (Figure 2) and in the employed population aged 15-64 (13 percent of the total in 2010) is similar to the European average, and it is actually lower than in other countries such as Germany and France. Looking at historical trends in Figure 2, Italy appears to be the country with the steepest increase of temporary contracts among young people in the EU.

The peculiarity of the Italian labour market concerns the possible inclusion of part of the formally self-employed workers (i.e. collaborators and external suppliers) in the group of temporary employees. In Italy 10 percent of those aged 15 to 24 are self-employed, compared to 4 percent on average in the EU (OECD 2010).Understanding how many of these are not really self-employed but "economically dependent" on a single firm is not an easy task and depends on the interpretation and the definition of "economically dependent". In a representative sur-

Figure 1

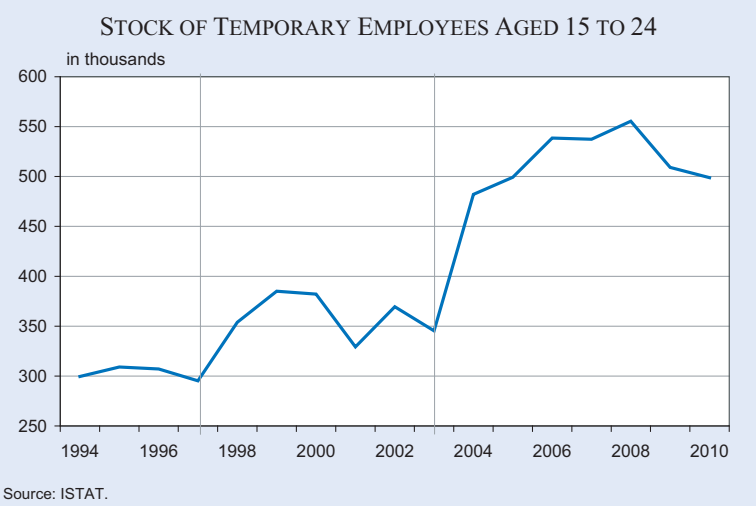
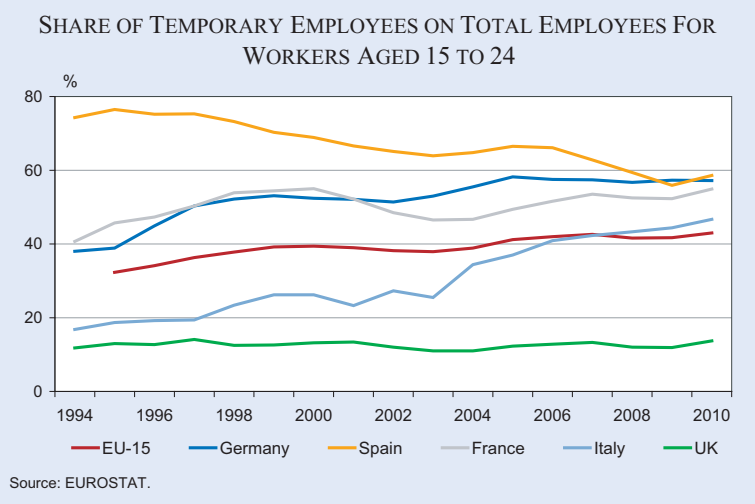


Figure 2



vey run by ISFOL, a research institute of the Ministry of Labour, self-employed workers were asked: 1) whether they had one single principal; 2) whether they worked exclusively at the principal office; and 3) whether they had a fixed working time imposed by their principal. Anastasia (2012) reports that those who responded affirmatively to all three questions were only one hundred thousand, but those who replied "yes" to at least one of those questions were 2 million. The best estimate of "economically dependent" self-employment is probably around 1 million workers, i.e. those who work exclusively at the principal office. In this sense, the inclusion of this type of workers in the category of temporary employees makes their incidence substantially higher in the Italian labour market than in other European countries, and increases the share of temporary contracts from 13 to 19 percent of the employed population aged 15-64 and from 50 to 70 percent of the employed population aged 15-24.

To understand this phenomenon, which circumvents the rules attached to the use of temporary contracts, we need to know why firms decide to use contracts of limited duration of any kind. The same ISFOL survey cited above also investigated this issue in order to better disentangle the motivations that drive demand for flexible work arrangements. The main results seem to indicate that temporary workers are used as a tool to rapidly adjust workforce to demand shocks (given their lower firing costs). Alternatively, firms can use temporary contracts as a screening device or a sort of extension of the probationary period or – and this is the case of the "economically dependent" self-employed – to reduce labour costs and social security contributions. It seems likely that in the presence of such labour cost-saving opportunities and of various types of temporary contracts and "economically dependent" self-employment opportunities, firms will continue to use temporary rather than permanent work.

Stepping stones?

Are temporary employment contracts really a temporary experience in one's career and act as springboards into stable employment, or do they represent a trap from which it is difficult to escape? While common to many debates around Europe, this question has become increasingly relevant in Italy due to the increasing diffusion of flexible employment –particularly youth employment, as documented in the previous section.

One way of quantifying the trap is to estimate individual transitions across types of employment contracts. Cross-country evidence for the youth labour force (15-24) is provided by the OECD (2010; Figure 5.8), using the European Survey of Living Conditions (EU-SILC, 2005-2006). It is shown that the one year transition rate from permanent to temporary employment is 50 percentage points (p.p.), a level that is much higher than the Spanish one (which is just above 20 p.p.) and not too far from the UK one (which is approximately 56 p.p.). One remarkable Italian peculiarity is that transition rates are lower among youths with tertiary education than among all youths, whereas the opposite occurs in all the countries considered. Another striking fact is the difference in transition rates into permanent work between temporary workers and the unemployed, which is almost 45 p.p. in the overall population of Italian youths, and only 20 (15) p.p. in the UK and Spain. This evidence seems to support the stepping stone hypothesis, at least for very young workers. However, if one considers the whole labour force aged 16-64, the impression is rather different. The European Commission (2010; Chart 29) based on data from the EU-SILC between 2005 and 2007ranks Italy amongst the countries with the lowest year to year exits from temporary employment into permanent one. In Italy, the probability of moving to a permanent contract from one year to the next is about half of the probability of remaining on a temporary contract over the same period (an odd ratio of 0.6). This ratio is very similar in countries like Spain, and much lower of 1.8, the level reached in the United Kingdom.

Moving on to country-specific evidence, more detailed information on labour market transitions can be obtained from the Labour Force Survey. Panel A of Table 1 is derived from the annual reports on the state of the labour market published in 2009 and 2011 by the National Labour Council (Consiglio Nazionale Economia e Lavoro - CNEL) using the longitudinal component of the Labour Force Survey between 2007 and 2008. Considering the youth sample first, the table shows that the one year transition rate from temporary employment into permanent one is about 32 p.p., much lower than the one derived from the EU-SILC discussed above, even though in that case the selected sample was much younger, which may partly explain the difference. On the other hand, temporary workers face a non-negligible probability of becoming unemployed or inactive after one year, approximately 7 and 8 p.p.. The

risks of unemployment and inactivity are much lower among permanent workers. Recent work for Spain (Bentolila et al. 2011) points to the possibility that the diffusion of temporary employment increases unemployment volatility, and the differential churning between employment and unemployment for workers on permanent and temporary contacts singled out in Table 1 is in line with this interpretation. The positive side of the coin is that temporary employment may act (better than permanent one) as a bridge into employment for the unemployed: in fact the destination of those youth leaving unemployment is twice as likely to be a temporary rather than permanent contract (18 versus 10 p.p.). In addition the transition from unemployment into permanent contracts is one third of the transition from temporary to permanent employment.

Considering the broader (16-64) sample, Panel A shows a lower transition rate from temporary contacts to permanent ones, and larger transitions into both unemployment and inactivity. While the latter may reflect retirement, the increase in the transition to unemployment, and especially the larger differential with permanent contracts, suggests that for older workers there are higher risks of labour market segmentation attached to temporary employment. This impression is reinforced if one notes that, in this sample, exits rates from unemployment are the same whatever the destination, permanent or transitory employment contracts.

Due to its rotating panel design, the Labour Force Survey enables following individual trajectories over one year windows only, i.e. it allows identifying the persistence of temporary employment just in the short run. Longer term insights can be gained using alternative data sources. For example, long term persistence of temporary employment can be analysed using administrative data from the archive of the National Social Security Institute (INPS). Relative to the LFS, this archive provides larger samples and can track individuals in principle throughout their entire career.

The larger sample size makes it possible to distinguish between workers on fixed-term contracts and workers on collaboration contracts within the large group of workers in temporary employment, the latter being often considered the more problematic form of temporary employment, as explained in the previous section. Making such a distinction in a meaningful way is not possible with survey data due to limited sample sizes. One shortcoming of the administrative archive concerns the absence of information on those individuals whose social security

Table 1

Transition rates across labour market states

Panel A: Labour Force Survey 2007-2008

Transition from	Transition to: Permanent	Temporary	Self-Employed	Unemployed	Inactive
			Age 16-30		
Permanent	85.6	6.5	2.5	2.6	2.7
Temporary	31.6	49.8	3.9	6.8	7.9
Unemployed	10.2	18.0	8.5	31.1	32.2
			Age 16-64		
Permanent	90.8	2.1	1.5	1.5	4.0
Temporary	26.5	49.9	4.7	7.3	11.5
Unemployed	11.7	12.6	6.3	32.6	36.7

Panel B: National Social Security Institute 1998-2004, age 16-40

Transition from	Transition to: Permanent	Fixed term	Self-Employed	Collaboration	Training	Not cov.
			2-year transition			
Fixed term	34.7	25.2	2.2	1.9	10.9	25.3
Collaboration	17.3	6.7	9.6	19.6	8.2	38.6
			4-year transition			
Fixed term	49.4	15.5	4.2	1.3	7.0	22.7
Collaboration	30.3	6.8	13.3	10.0	4.2	35.4
			6-year transition			
Fixed term	55.5	10.4	6.5	1.7	5.1	20.9
Collaboration	35.1	8.4	13.6	5.1	1.9	36.0

Notes. Row sums equal 100.0.

Sources: Panel A, CNEL (2009; 2011); Panel B: Berton et al. (2011).

contributions are not managed by the INPS, and this is the case of public sector employees. In addition, the unemployed and the inactive are also simply categorised as "Not covered". Berton et al. (2011) use INPS data to compute transition rates across contract types between 1998 and 2004 for a sample of workers aged between 16 and 40. Their results are summarised in Panel B of Table 1. Starting with fixed-term employees, they report figures for two and four year transitions from temporary to permanent employment of 34 and 49 p.p. respectively. Over six years they find that 55.5 percent of temporary employees on fixed-term contracts become permanent ones, 10 percent remain temporary and 20 percent are no longer observed in the administrative archive, while only minor proportions end up in self-employment, collaborations or training and apprenticeships. Different patterns of transition characterise collaborators. The degree of persistence in this state is much lower compared with fixed-term employees, while the transition into permanent employment is lower. On the other hand, four out of ten of these workers are no longer observed in the administrative archive two years later, an outcome that may suggest a state of unemployment or inactivity, confirming that there is more instability attached to these contracts than to temporary employment as a whole.

Taken together, the transition rates reported in Table 1 help draw up a picture of temporary employment which shows that, in the medium-term, over half of temporary employees manage to escape to the primary segment of the labour market; for these individuals temporary jobs are really stepping stones into better ones. More problematic is the situation for the remaining half, the majority of whom is either trapped into a sequence of temporary contracts, becomes unemployed or exits into inactivity.

Wage gaps

While the transformation of temporary contract into permanent ones has received much attention in academic and policy debates, other aspects play important roles in determining the overall quality of temporary jobs and their viability as stepping stones into the labour market. Wage differentials with permanent workers are certainly one of these. If temporary contracts are screening devices, then theory of adverse selection would predict lower wages for workers during their trial period. However, temporary workers bear more economic risks than permanent ones, and efficient risksharing would result in a wage compensation for temporary workers. In any case, temporary and permanent jobs may be very different in productivity to start with, so that it is crucial that estimated wage differentials are generated from regression analyses that control for workers and jobs characteristics as much as possible.

Among the few studies that have attempted estimating the temporary/permanent wage gap in Italy, Picchio (2006) uses data from the Survey on Households Income and Wealth (SHIW) on net hourly wages and reports a wage gap against temporary workers of 12 percent. To provide further evidence on wage gaps, we use data from the INPS archive, which provides information on gross weekly wages, see Table 2. The longitudinal structure of the

Table 2

Differences in wage levels and wage instability between temporary and permanent workers

	Men		Women	
	Panel A: Log-Wages			
Whole sample	-0.074	***	-0.042	***
Age<=30	-0.057	***	-0.028	***
Age>30	-0.086	***	-0.062	***
	Panel B: Wageinstability			
Whole sample	0.025	***	0.009	***
Age<=30	0.005	***	-0.003	°
Age>30	0.049	***	0.025	***

Notes: Reported are coefficients associated with temporary employment from fixed effects regressions that control for age, occupation, industry, region and firm size. *** and ° denote statistical significance at the 1 and 30 percent level respectively. Wage instability is defined as the absolute deviation of individual log-wages from individual specific five period averages.

Source: Own elaborations on gross weekly earnings data drawn from the INPS archive 1985-2003.

administrative archive allows us to use fixed effects specifications, which is crucial in this context since the temporary/permanent divide may entail a lot of unobserved heterogeneity. Using specifications that include flexible controls for age, occupation, industry, region and firm size, in Panel A we estimate a temporary/permanent wage gap of 7 percent among men and 4 percent among women. Interestingly, the gap grows with age: it is 5 percent for men younger than 30 (3 percent for women) and 8 (6) percent for older men (women). Being a temporary worker at older ages appears to be a serious problem, possibly reflecting the fact that the bulk of wage growth occurs in permanent contracts after the age of 30, while there is no wage growth in temporary contracts.

The long panel structure of the administrative data allows not only an investigation of wage gaps net of individual unobserved heterogeneity but also a consideration of the wage instability associated with temporary employment. Recently, the OECD (2011) has placed much emphasis on the concept of wage or earnings instability, i.e. the volatility of one's earnings around long-term earnings trajectories, as a measure of the extent of uncertainty surrounding labour incomes, with potentially deep welfare-diminishing consequences. Using an approach similar in spirit to Gottschalk and Moffitt (1994), we compute wage instability as the individual specific absolute deviation of log wages from 5-year averages, and use fixed-effects regressions to estimate the impact of temporary employment on instability, while flexibly controlling for age, occupation, industry, region and firm size. Results in Panel B of Table 2 clearly indicate that temporary workers experience more wage instability than permanent ones. For example, men on temporary contracts experience a wage deviation from the period average that is 2.5 p.p. larger with respect to permanent ones to (the average deviation in this sample is 10 p.p.); the effect for women of0.9 p.p. is smaller. Again, we find evidence that this gap widens with age. For men younger than 30 the instability differential is only 0.04 p.p., while for women in the same age group we did not find any statistically significant difference. On the other hand the gap is 4.9 p.p. and 2.4 p.p. for men and women older than 30. Overall, the investigation of wage differences between temporary and permanent workers shows that the former experience a disadvantage that comes in two forms. Firstly, they are paid less on average, and this penalty hardly squares with a screening interpretation considering that the gap is larger at older ages. Secondly, they are subject to higher wage fluctuations, which, combined with the larger employment instability that is inherent with this type of employment contract, depicts a scenario of great uncertainty for temporary workers.

Effects on productivity

Depending upon the reasons for the use of temporary contracts, there may be some relevant productivity differential between permanent and temporary workers measured at the firm level. On one hand, one can think of multiple mechanisms why a relaxation of the rules about the use of temporary contracts (which corresponds to a lower EPL for temporary contracts) may induce a negative effect on firms' productivity. Firstly, permanent contracts provide insurance and promote specific investments; secondly, when facing high EPL firms become more selective with workers and less productive matches are not realised or less productive firms do not survive altogether. According to both these mechanisms a lower EPL for temporary workers should lower productivity. On the other hand, high EPL hampers the reallocation of workers and jobs across industries and firms by inducing substitution of specific for general skills, reduces workers effort, reduces the undertaking of highly productive, but risky activities. Thorough these channels we should observe that regulations that lower EPL for temporary workers should increase firms' productivity.

In Cappellari et al. (2011) we use panel data on Italian firms to investigate the effects on temporary employment of the "Biagi Law" and of a Decree Law (no. 368) issued in 2001. The Biagi reform relaxed the regulations on apprenticeships, while the Decree eased the applicability of fixed-term contracts. We exploit variation in the implementation across regions (for apprenticeships) and sectors (for fixed-term contracts) for identification purposes. We find that the reform of apprenticeship increased job turnover and induced the substitution of external staff (mainly collaborators and agency workers) with firms apprentices, with an overall productivity-enhancing effect. The reform of fixed-term contracts instead did not produce the intended results: it induced a substitution of temporary employees in favour of permanent ones and reduced capital intensity, generating productivity losses. We interpret this result as an effect of unclear regulations, which induced entrepreneurs to shun fixed-term contracts (at least in the early period of the new law) for fear

of having to face court suits for unfair use of fixed-term contracts. In an environment where employers can choose among different types of temporary contracts, a new law designed to favour the use the fixed-contract resulted in a diversion into other types of temporary contracts or into permanent contracts. We estimate high substitution elasticities across different types of temporary contracts that are consistent with this interpretation.

Conclusion and future policies

There is widespread consensus that the introduction of temporary contracts has favoured the reduction of youth unemployment (see Figure 3) and has contributed to the positive performance of total job creation in the past decade. However policy makers are also worried of the low quality of many of those jobs and of the uncertain prospects of those that happen to be trapped for a long time in those jobs. Particularly worrying is the phenomenon of the "economically dependent" self-employment, whose large number, if included in the range of temporary jobs would increase the share of youth in temporary jobs to a very high level compared to most European countries.

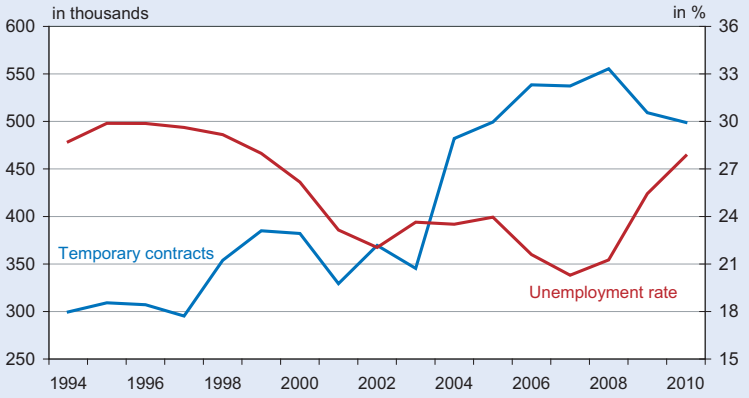
There is also general agreement among Italian economists that the segmentation of the labour market could be reduced by closing the existing gap in labour costs between permanent workers and temporary workers. In the current legal framework, one main reason makes temporary contracts more attractive to the employer: in firms above 15 employees the definition of individual dismissals for economic reasons implies that whenever it is judged in a court case that a dismissal occurred for "unjust cause" (i.e. in absence of the conditions contemplated in the Labour Code), the employer will have to compensate the worker for the foregone wages and the worker can choose between reinstatement and 15 months of severance pay. In light of the long duration of trials and of the ensuing high costs of uncertainty, the above elements hinder the creation of permanent jobs.

If one wants to reduce the marginal cost faced by employers when deciding whether to upgrade expiring temporary contracts into permanent ones, two measures should be taken: firstly social contributions of "economically dependent" self-employed should be increased and, secondly, the firing costs of permanent workers should be reduced.

There are basically three proposals for reducing these firing costs, which we discuss in decreasing order of complexity. The first would abolish the possibility of resorting to courts for cases of individual dismissal for economic cause, on the grounds that judges are not apt to discuss the financial situation of firms and the entrepreneurial choices involved. According to this proposal firms can fire for economic reasons with a severance payment. This would make EPL similar to the American case. Proponents suggest completing the reform by building an experience rated system whereby firms pay contributions to a fund (managed by firms and unions together), which sustain laid-off workers until they find a new job. This is the most radical proposal and probably the hardest to implement politically, as reinstatement via courts is often viewed as a guarantee of workers' rights. The second proposal would substitute most types of temporary contracts with a "single contract" which delays the application of the current regulations against individual dismissal for economic reasons to the third year of seniority and beyond (currently it is three months) and would introduce a severance payment for the first three years. This is a compromise that moves forward the reinstatement guarantee, but maintains some difference in firing costs between permanent and temporary contracts. Finally, the third proposal would introduce a new option at the moment of

Figure 3

Stock of Temporary Contracts and Unemployment Rate for Workers Aged 15 to 24



Source: ISTAT.

individual dismissal for economic cause: the worker would be offered a severance payment which rises with seniority. If the worker accepts the payment s/he renounces the right to a court case, but upon refusal s/he retains the right to sue the employer for unfair dismissal for discriminatory reasons. This last proposal creates an incentive to avoid resorting to the courts and eliminates the uncertainty attached to court rulings. These are the main policy options available to the Italian Government at the time of writing.

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The Impact of the Financial Crisis on the Credit Insurance Market

Financial markets are characterized by severe problems of asymmetric information between the parties involved in a transaction. In terms of credit this means, for example, that the borrower has much better information about his/her risk profile and therefore the probability that s/he will repay a loan than the lender. Many forms of contractual solutions have been developed in order to overcome these problems. However, even with these contracts, it is not possible to realize all socially beneficial transactions, meaning that market failure does occur. Therefore, areas do exist in which the government intervenes. During the recent financial and economic crisis the information problems causing market failure have become even more severe than in ordinary times, raising the scope for government intervention. One example are failures in the market for credit insurances. In this article we review how governments have reacted and altered their involvement in the credit insurance market as a result.

Credit insurance is used for different types of loans. Firstly, it can be related to a trade credit.[1] If a supplier grants a trade credit to his customer, he asks his/her buyer for a guarantee from his/her bank. Thereby, the risk that the buyer cannot pay for the goods supplied is shifted from the supplier to the buyer's bank. The bank charges a commission on the bank guarantee and takes into account that it has a contingent liability when determining the buyer's credit limit. Secondly, credit insurance can be related to a bank loan and here, most of the time, to the financing of export related activities. Suppose a firm exports goods or services. As in the case with a domestic customer, the firm may need a bank loan for the working capital financing of this activity or the firm grants trade credit to its customer and finances its resulting liquidity requirements through

[1] For firms, trade credit is a major source of short-term credit (OECD, 2011).

Table 1

Intervention in Credit Insurance Markets - Protection for Domestic Receivables

	Domestic	New coverage		Other	Comment [a)]
		Top-up	Gener-alised		
Austria					
Belgium	•	•			Indirect using SFI.
Czech Republic					
Denmark					
Finland					
France	•	•	•		Indirect using SFI (CCR).
Germany	•	•			Indirect.
Ireland					
Luxembourg					
Netherlands					
Portugal					
Spain	•	•			Indirectly through SFI (CCS).
Sweden					
United Kingdom	•	•			Indirect.
Norway					Short-term credit insurance already provided by SEA.
Canada	•	•			Indirect using SEA; direct SEA provision to automotive sector.
Japan					
New Zealand					
United States					

Symbols: • = Yes.
For those columns where no symbol has been inserted, assume a "No" response. This approach is taken to ensure a clearer presentation of responses.

[a)] Reference to "indirect" means that provision is through private sector.

SFI = State financial institution; SEA = State export agency.

Source: OECD, 2011.

Table 2

Intervention in Credit Insurance Markets - Protection for Export Receivables

	Export	New coverage Top-up	New coverage Gener-alised	Other	Comment [a)]
Austria	●	●	●		Direct by SEA and indirect through reinsurance by SEA.
Belgium	●	●			Indirect using SFI; for EEA only.
Czech Republic	●			●	Increased state risk retention (to 99%).
Denmark	●	●	●		Indirect: reinsurance via SEA.
Finland	●	●			Direct by SEA.
France	●	●	●		Indirect.
Germany	●	●			Indirect via industry consortium.
Ireland					
Luxembourg	●	●			Indirect via SEA.
Netherlands	●	●			Indirect via reinsurance.
Portugal	●	●			Indirect.
Spain	●			●	Indirectly through pools.
Sweden					
United Kingdom					
Norway	●	●			Short-term credit insurance already provided by SEA for all countries.
Canada					
Japan					
New Zealand	●	●	●		Direct and indirect via reinsurance through SEA.
United States	●			●	Reduced premium rates and increased coverage for SMEs.

Symbols: ● = Yes.
For those columns where no symbol has been inserted, assume a "No" response. This approach is taken to ensure a clearer presentation of responses.

[a)] Reference to "indirect" means that provision is through private sector.

EEA = European Economic Area; SFI = State financial institution; SEA = State export agency;
SME = Small and Medium Enterprise.

Source: OECD, 2011.

a bank loan. The risk of financing customers abroad, however, is higher as they are farther away and reside in a different jurisdiction. Depending on the country in which the buyer is located and on the product or service traded, there can be significant political risks in such a deal.[2] Banks only accept risks up to a certain level and therefore they are often not willing to grant loans that bear a high level of political risk. Many governments created export credit agencies that take over the political risk such that risk comes down to a level that banks are willing to bear. Through such measures governments can improve the competitive position of their exporting firms (Felbermayr and Yalcin, 2011). During the recent crisis, however, credit insurance agencies started to reduce their exposure as they experienced higher losses (OECD, 2011).

The following tables summarize the interventions of governments in the credit insurance market. There are two tables, one for the protection of domestic receivables, the other for export receivables. They contain information on 19 OECD countries. Six countries changed their policy with respect to credit insurance of domestic receivables during the crisis (Table 1). Belgium, France, Germany, Spain, United Kingdom and Canada provided new coverage by topping-up existing programs, while only France generalized its support scheme. Most of the time, the support was granted through the private sector, which itself obtained guarantees or could use reinsurance schemes from a state financial institution. Sometimes (for example in Canada) the state export agency started to support domestic transactions as well.

In more countries the respective government engaged in activities protecting export receivables (Table 2). In most cases existing programs were topped up, for instance, by increasing the amount of coverage or granting guarantees to firms that were

[2] Political risk varies over products and services traded. For example, some industries (such as infrastructure or telecommunication) are often state-owned or regulated and therefore suppliers face a higher degree of political risk (for the relationship between political risk and the syndicate structure of loans, see Hainz and Kleimeier (2012)).

Table 3

Intervention in Credit Insurance Markets - Actions to Support Credit Insurance Markets (in Selected Countries)

	Remarks
France	3 temporary programmes have been established by the French government to support private credit insurance markets, both for domestic business as well as for export-oriented business. All three programmes involve some sort of state reinsurance or guarantee mechanism: • The Complément d'Assurance-crédit Public (CAP) is intended to ensure the continued availability of credit insurance for suppliers dealing with small to medium-sized purchasers (less than EUR 1.5 billion in revenues). Businesses that find their credit insurance coverage cut by private-sector credit insurers due to their exposures to these types of purchasers can obtain a CAP guarantee that provides coverage up to 50% of the original coverage amount (as of 1 October 2008). This program allows businesses to retain 100% of their original coverage so long as private insurers do not cut their coverage below 50% of the original amount; any coverage reduction greater than 50% means a reduction in CAP coverage to ensure 50/50 risk-sharing with the private sector. CAP amounts insured by credit insurers are reinsured directly with the Caisse Centrale des Reassurances (CCR), France's state owned natural catastrophe reinsurer. CAP is offered on a 3-month renewable basis, with higher-than-average-market premiums charged (1.5% of receivables versus an average market rate of 1%; 0.3% is given to the credit insurer for commercialisation and brokerage of the CAP, 1.2% to the CRR) to reflect the risk undertaken by the CCR. The CAP became operational in December 2008. The state's guarantee to the CCR for the CAP is capped at EUR 10 billion and is expected to expire on 31 December 2009. With the establishment of the CAP programme, the private-sector credit insurers agreed to the following commitments as a means to promote confidence between credit insurers and their clients, and improve transparency in the market, namely: – Systematically propose the CAP to firms; – Not reduce, globally, the percentage of receivables of French firms that they insure over the next 6 months; – Provide to the government, every month, statistics on the level of insured receivables, with specification of the extent to which the receivables of small and medium-sized businesses are insured; – Re-examine, within 5 days, any file transmitted to the French national credit mediator regarding a firm experiencing a cut-back in coverage; – Not proceed with cutting back coverage on a sectoral basis with taking into account the individual circumstances of each firm; – Systematically provide a rationale for any decision to modify coverage for any given risk – Provide necessary explanations to those businesses seeking information on how the credit insurer's evaluation of the individual business is evolving. • The CAP+, established in May 2009, responded to concerns about: (a) cancelled credit insurance coverage – thus disabling a previously insured business' access to CAP; and (b) the inability of non-insured businesses to access any credit insurance to protect themselves against new-found risks posed by the financial crisis. Coverage under CAP+ is provided to businesses transacting with small or medium-sized businesses (same revenue threshold as CAP) that have seen their coverage fully withdrawn or that are seeking to secure coverage, and whose default rate over a 1 year period is expected to lie between 2 to 6% (deemed to be a low enough default rate to avoid undue exposure by the state to firm insolvency risk, but a high enough rate to prevent CAP+ from insuring risks that can be covered by industry). The CAP+ is organised differently from the CAP. It is set up as a credit insurance guarantee fund capable of covering EUR 5 billion worth of receivables on an annualised basis, and is administered by the CCR. Insured parties retain 20% of losses, with the remaining losses retained by the state, through the CCR, up to a EUR 600 million threshold on the CCR's share of losses; in excess of this threshold, credit insurers then absorb 10% of losses. The private-sector credit insurers are responsible for the commercialisation of CPA+ but do not retain any risk (subject to the threshold mentioned above); instead, all amounts insured under CAP+ are transferred directly to the account of the guarantee fund. The French government has to date committed to injecting EUR 200 million into the CAP+ guarantee fund. The level of coverage that can be obtained is determined by the applicant, but a ceiling is placed on the amount of credit insurance per counterparty (EUR 200,000 for less risky counterparties, EUR 100,000 for riskier counterparties), with the maximum indemnity per insured business being EUR 3 million. Credit insurance is provided only on 3-month renewable basis and costs an annual 2.4% of receivables (0.6% is given to credit insurers for commercialisation and management of the guarantee, and 1.8% to the CCR). At least 20%of the risk must be retained by insured business as a means to align incentives. The CAP+ was seen as a temporary measure and is due to expire on 31 December 2009. • CAP Export was established in October 2009 to support small and medium-sized enterprises (similar threshold as in CAP/CAP+) based in France and exporting abroad. CAP Export effectively provides two types of guarantees on a 3-month renewable basis, similar to CAP and CAP+: as with CAP, it can provide coverage to exporters that have seen a reduction in their export credit insurance coverage, up to 50% of their original coverage; in addition, CAP+ provides coverage for exporters that have lost their coverage entirely or for exporters seeking coverage but unable to obtain it, and where the probability of default of the counterparty over the next year lies between 2 and 6%. CAP Export is administered by the private-sector credit insurers and is supported by a state guarantee; Co face, a private-sector credit insurer, manages the risk for the state guarantor, that is, the French Treasury. Additional notes: – Credit insurance covers roughly 1/4 of receivables in France, or approximately EUR 320 billion. A majority of risks covered by credit insurance are linked to small and medium-sized companies. – A private-sector credit insurer, Co face, has noted that for every EUR 5 of short-term credit given to firms, EUR 1 comes from banks while EUR 4 come from suppliers (RiskAssur - hebdo, 30 March 2009). – Building and public works sector is seen as particularly hard hit by non-payment for goods and services rendered in the crisis. – Take-up of CAP and CAP+ as of 9 October 2009: EUR 448 million guaranteed receivables under CAP and 14,986 activated files; EUR 491 million guaranteed receivables under CAP+ and 23,620 activated files. Amounts insured on average are relatively modest: EUR 30,000 for CAP and EUR 20,000 for CAP+. Roughly 38,000 commercial relationships have reportedly been protected by CAP and CAP+.

Table continued

Germany	The federal government has established a temporary export credit insurance scheme that offers state short-term export credit insurance to German exporters that are confronted, due to the crisis, with unavailability of trade credit insurance cover in the private market for financially sound transactions. This scheme involves the extension of the already existing state export credit guarantee scheme. The existing public scheme offers state insurance for short-, medium- and long-term export transactions. However, in case of the short-term transactions, public cover was offered only for exports to countries defined as non-marketable. The state-sponsored insurance will be offered by Euler Hermes Bund to companies established in Germany, with no limitations regarding to the groups of products or sectors covered. That said, coverage will be offered for four main types of products: Whole Turnover Policy (APG) (or in simplified form for SMEs as Export Whole Turnover Policy light), Supplier Credit Cover (single or revolving) and Manufacturing Risk Cover. The standard policy offered by the private credit insurers in Germany is the whole-turnover policy, where all exports by the company is covered up to an agreed turnover limit. Exporters will, in principle be required to retain 10% of the risk, but they may apply for a reduction to 5% (this reduction of risk retention by the exporter is available only until 31 December 2010, though the government reserves the right to increase the exporter's retention to a maximum of 35% should the risk assessment of the buyer identify a heightened risk). The remaining risks will be covered by the government. Euler Hermes does not retain any risk related to the coverage provided under the scheme. Export transactions that are insured must be justifiable in terms of the commercial and political risk involved. These include the financial strength and economic policies of the country concerned, as well as macro-economic and political factors, as well as the foreign buyer's creditworthiness and payment record. The scheme will not be applied to buyers in economic difficulties or to buyers with a weak or insufficient solvency. The scheme will be administrated on behalf of the federal government by a private-sector consortium consisting of Euler Hermes Kreditversicherungs-AG (Euler Hermes Bund) and PricewaterhouseCoopers AG WPG – the same consortium that manages the public German export credit insurance system. The Consortium will receive the applications for cover, conduct risk assessment, take the decisions to provide coverage on behalf of the state for export contracts up to EUR 5 million (or prepare decisions on applications for consideration at the meetings of the Inter-ministerial Committee (IMC) for contracts exceeding this threshold), and handle claims. The Consortium will receive around EUR 55-68 million for administration, depending, inter alia, on the volume covered transactions. A strict "Chinese wall" will exist between the activities of Euler Hermes as a private credit insurer (Euler Hermes Private) and the Consortium (in particular Euler Hermes Bund). This translates to separation of accounts and administration between those parties. Moreover, no exchange of credit information on individual foreign buyers takes place. In addition, Euler Hermes Private is not in a position to shift risks which are difficult to accept on own account to the Consortium. The same system of premium rates will be applied as the one, which defines the level of premium for the State insurance cover for the non-marketable countries in the normal market conditions. The premium to be paid by the exporter for the insurance cover within the notified measure varies according to the category of the country, in which the buyer is based, his creditworthiness, nature of risk covered and the type of the policy. The annual remuneration due to the Consortium for the administration of the public scheme with the total budget of up to EUR 117 billion is estimated at around EUR 55-68 million and depends, inter alia, on the volume covered transactions. This corresponds to all administrative costs and a management fee for the Consortium related to the administration of the whole State export credit guarantee scheme covering both non-marketable and temporarily non-marketable risks. The public short-term export credit insurance cover is available to all exporters established in Germany until 31 December 2010. In December 2009, the federal government set up a guarantee scheme that offers top-up cover in the trade credit insurance. The guarantee scheme has a total volume of up to EUR 7.5 billion and will expire on 31 December 2010.
Spain	The Spanish government has undertaken two initiatives in relation to credit insurance, one oriented toward the domestic market, the other oriented to the export market: • In March 2009, the Spanish government introduced a special measure to reinforce the capacity of the private credit insurance market in Spain. The government authorized the Consorcio de Compensación de Seguros (CCS), a state-owned reinsurer responsible for compensating insurers covering extraordinary risks, to reinsure credit and bond risks covered by domestic credit and bond insurers. The value of transactions supported by this initiative could reach EUR 40 billion. The CCS and UNESPA (the Spanish insurance association, Associación Empresarial del Seguro) reached an agreement by which EUR 20 billion worth of credit transactions could be supported in 2009. The CCS agreed to cover 85% of losses on credit insurance contracts insofar as the loss rate on these contracts lies between 85% and 130% of premiums paid. This could lead to a loss of up to EUR 200 million, with the net loss being no more than EUR 170 million for the CCS. This agreement will be in effect for 3 years. It includes the major domestic credit insurers except Euler Hermes. • The government, through the Compañía Española de Seguro de Crédito a la Exportación (CESCE), has sought to introduce greater flexibility into its ability to support export credit insurance, including the creation of a special facility for providing coverage of "pools" of small and medium-sized firms in association with sectoral associations and chambers of commerce (CESCE-PYME). The government has presented a plan to Parliament that would establish a scheme for the CESCE similar to that for the CCS that would provide coverage of EUR 9 billion worth of export credit insurance policies.
United Kingdom	The UK government introduced a Trade Credit Insurance Top-up Scheme (TCITS) that became operational in May 2009. The TCITS enables any UK firm with a credit insurance whole turnover policy that has seen a reduction in its coverage with respect to a particular purchaser to purchase additional insurance with respect to that purchaser. The scheme does not apply to firms that have seen their underlying cover fully removed. The scheme only applies to trades taking place within the UK and thus excludes export transactions. The scheme is administered by the private sector on behalf of the government and will be in place under 31 December 2009, after which no top-up policies will be offered. The aggregate level of top-up insurance provided under the scheme is capped at GBP 5 billion. Top-up coverage is available if the: • the underlying cover is in respect of trades taking place within the UK; • the trades covered by the insurance have payment terms of no more than 120 days, and any pre-shipment coverage included in your underlying policy terms is of no more than 120 days; • the original level of cover was in place for at least 30 days; • the reduction in the level of cover happened either on, or after, 1 October 2008; and, • the reduction in the level of cover was instigated by the credit insurer – and not at the request of the insured.

Table continued

United Kingdom	Up to 28 days' retrospective cover can be purchased in circumstances where a business requires continuity of cover from a partial reduction made by insurers in the previous 28 days. Top-up policies can be bought under the government scheme for a period of 6 months. The coverage that can be obtained is the lower of the following amounts: • the amount that restores the level of cover to the amount previously held; • the amount equal to the level of cover now offered under the credit insurance policy; or, • GBP 2 million. If the underlying cover is full withdrawn, then the top-up cover will be terminated. Transactions already covered will continue to be insured under the top-up scheme, but no new transactions will be covered. E.g.: • If cover provided by the underlying policy is reduced from GBP 100,000 to GBP 80,000 then top-up cover of GBP 20,000 can be purchased to restore cover to the original level of GBP 100,000. If cover subsequently reduces to GBP 50,000, then an additional top-up cover of GBP 30,000 can be purchased, bringing the value of the top-up policy to GBP 50,000, restoring the total level of cover to the original level of GBP 100,000. • However, if the underlying cover subsequently falls below GBP 50,000, for example to GBP 20,000,then the level of cover provided by the top-up policy will fall to match the amount provided by the underlying policy, in this case GBP 20,000. The total level of cover will therefore be GBP 40,000. The (6-month) premium rate for top-up cover is 1% of the level of top-up cover provided under the scheme at the time when the firm joined the scheme. An administrative charge is applied by the credit insurers administering the scheme. If the case arise where it is possible to purchase additional top-up coverage, then premium amount will increase (based on extra amount needed and amount of time remaining on the policy). If the underlying cover falls during the first 3 months, then a refund on the premium paid is possible (1/3 multiplied by the difference between the higher level of cover and the lower level of cover provided under the top-up policy during this period). Beyond 3 months, no refund is possible. Firms with top-up cover are permitted to change credit insurers as long as the credit insurer to whom they are transferring their business is also part of the scheme, and disclosure is made of the use of top-up policy. All credit insurers participating in the government scheme adhere to a statement of principles, published by the Association of British Insurers that outlines the behaviour of credit insurance providers. Changes have been made to the scheme since its introduction, e.g.: backdating of retroactivity to 1 October 2008, instead of 1 April 2009; reducing premium rate from 2% to 1%; abolishing minimum amount of top-up coverage (GBP 20,000); and increasing maximum top-up cover from GBP 1 million to GBP 2 million. No known changes have been made to the Export Credits Guarantee Department's (ECGD) export credit insurance policy, which is available for transactions valued at more than GBP 20,000 involving capital goods, provision of services, or construction projects (transactions involving consumer goods or commodities on short payment terms are excluded). No coverage is provided for developed country markets. Additional notes: – In 2008, credit insurance firms insured over GBP 300 billion of turnover, covering over 14,000 UK clients in transactions with over 250,000 UK businesses. – As of 2 September, 52 companies had benefited from GBP 1.1 million in coverage (viewed as too low).
Japan	In response to the financial crisis, the following measures have been introduced, amongst others: 1. Financial support for business by Japanese overseas subsidiaries: The following support will be available through the end of March 2010 by the Nippon Export and Investment Insurance (NEXI) to meet the needs of Japanese overseas subsidiaries: • Support for working capital: Overseas Untied Loan Insurance (OULI) will be available to loan financing for Japanese overseas subsidiaries as their working capital with 1-year term or longer (currently OULI is available to loan financing for investment capital only for a 2-year term or longer). • Increase of commercial risk cover: The percentage of commercial risk cover of OULI to loan financing for Japanese overseas subsidiaries will be increased up to 90% from the current level of 50%. • Cover with parent company guarantee: OULI will be extended to loan financing to Japanese overseas subsidiaries based on the credit worthiness of their parent companies if guarantees are provided by the parent companies. 2. Insurance cover for supplier's credit: The Japan Bank for International Cooperation (JBIC) launched, as an exceptional temporary measure, a facility for export credit insurance, to be made available for exports to developing countries with deferred payment. Loans will also be made available for investment projects in developing countries through major Japanese companies (overseas investment loans). Separately, JBIC launched a financing facility that provides loans and guarantees to Japanese firms (including small and medium-sized enterprises) to finance their business operations in industrial countries - normally such facilities are provided only for firms operating in developing countries. Eligible businesses are defined as: "the business categories determined by the competent minister to belong to the industries that are experiencing significant difficulties in promoting the government policy of maintaining their international competitiveness due to the global financial turmoil".
United States	In October 2008, the Export-Import Bank of the United States (Ex-Im Bank) reduced its premium rate by 15% on two types of export credit insurance: short-term small business multibuyer policies (designated as ENB), and short-term small business environmental multibuyer policies (designated as ENV). The premium rate reduction, effective Oct. 1, 2008, affects approximately half of all Ex-Im Bank insurance policy holders. In November 2009, the Ex-Im Bank raised the upper limit of its small business multibuyer export credit insurance policy. The eligibility ceiling was raised from USD 5,000,000 to USD 7,500,000. Other policy enhancements include: 1) no first loss deductibles, 2) discounted insurance premiums, and 3) the receipt of cost-free, exporter performance risk protection for lenders financing receivables for qualified exporters. The broadened program eligibility will be effective 1 December 2009. Current Ex-Im Bank multibuyer policy holders, who previously were ineligible for coverage enhancements but are eligible under the new ceiling, will be offered conversions to the enhanced policy.

Notes: EEA = European Economic Area; SME = Small and Medium Enterprise.

Source: OECD, 2011.

not eligible before. In Japan, for instance, support became also available for business operations in industrial countries; before it was restricted to developing countries, but there was a wide range of other measures as well (see Table 3). In many cases the existing state export agencies were the agents for providing the supporting measure. However, there are countries in which private credit insurances could reinsure themselves from the government so that support was transferred indirectly. Interestingly, nearly all governments that intervened in the credit insurance market for domestic receivables did this in the market for export receivables as well. The United Kingdom is an exception because it only altered its policy with respect to domestic receivables.

In addition to these two tables, the DICE Database contains a table showing details of which actions were taken to support the credit insurance market in all of the 19 countries. Information in this table is very detailed and it is therefore beyond the scope of this article to offer such information for all countries. Here, to give the reader an idea of the information provided, Table 3 shows selected countries only (France, Germany, Spain, United Kingdom, Japan and the United States).

C.H.

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Tax Concessions for Brainpower – Tax Policy as a Measure in the Competition for Brainpower

Knowledge-based societies, as in Western Europe or Northern America, are based on highly-skilled workers. The constantly increasing scope of knowledge means that all countries are experiencing growing demand, especially for highly-skilled human resources in science and technology (HRST). To safeguard and improve the situation of a country in international competition – in economics, science, technology and any other fields - it is therefore essential to promote scientific exchange and make the country attractive for highly-qualified immigrants. For that reason concessions have been introduced in a number of countries to reduce the effect of tax on migration decisions. This has particularly been the case in high-tax countries aiming to become more competitive destinations for high-skilled workers, and in countries concerned about particular tax rules discouraging high-skilled workers from locating in a country. Meanwhile, other countries have used tax concessions to actively attract and/or retain highly-skilled workers. As of 2010, targeted tax concessions for highly-skilled workers have been introduced in 15 OECD countries (see Table 1). The OECD's Taxation and Employment analyses the taxation of mobile highly-skilled workers, and especially the tax concessions for this group.

The OECD finds that, in countries which introduced concessions, the design has generally been driven by the particular policy goal of the concession, and hence varies significantly across countries. Ten of the 16 reviewed countries have clear skill requirements. Belgium, Italy, the Netherlands, Portugal and Sweden want immigrants to hold a tertiary education degree and to engage in activities in research or science. Additionally, the Italian law demands documented research activities for at least two years. Finland and Denmark offer tax concession for highly-skilled migrants only if they earn a certain amount per month. In Poland immigrants engaged in artistic, sport or expert activities can also join the concession for highly-skilled workers. People who achieve their earnings from high-value-added scientific or even artistic or technical activities are invited to enjoy the tax concessions that Portugal offers to migrants. Switzerland requires its migrants to be managers or specialists. In New Zealand the concession is available to all migrants and to returning nationals. There are no further skill requirements. The governments of France, Ireland, Spain, the United Kingdom and Australia do not demand any skill requirements either.

Most countries exempt the migrants partially from the tax burden. In Belgium, for example, the state grants a 75% exemption from wage withholding tax for temporary and permanent foreign migrants if they are research workers. The Italian government offers the migrants a 90% exemption from personal income tax on earned income for three years. In additional to a tax exemption of 25% in Sweden, the social security contributions are also exempted by the same amount. Switzerland enables foreign migrants – if they remain temporary – to deduct migration related costs from their tax burden. The two non-European countries considered – Australia and New Zealand – exempt migrants from income tax on foreign sourced income. That measure addresses concerns about the taxation of capital income affecting migration decisions. These measures exempt all (unearned) foreign sourced income from taxation.

In most of the countries the concessions are subject to time restrictions. An obvious consequence of a time restriction is that it will limit the fiscal cost of the measure. However, this must then be traded off against the likely effectiveness of the concession in encouraging highly-skilled workers to migrate to, or remain in, a specific country. A time restriction may also be imposed on equity grounds, while in some cases a permanent concession may not be considered necessary once migration has been induced. Providing reduced taxation for one group of taxpayers, and not others will clearly raise equity concerns. These concerns must be balanced against the expected benefits of attracting and/or retaining high-skilled workers. Limiting duration of availability is a way of reducing the long-term inequities of such differential tax treatment, but of still having an impact on migration decisions. This is especially the case if the concession becomes less necessary and therefore has less impact on migration decisions in later years. With respect to duration France is most restrictive: the partial exemption from income tax for payments for installation costs is granted on just a one-off basis. The Netherlands and Portugal offer their concessions for up to 10 years, while in

Table 1

Tax Concessions for High-skilled Workers, 2010

	Type of concession	Time restriction on eligibility for concession	Worker type	Skill requirement
Belgium	75% exemption from wage withholding tax	-	Temporary and permanent foreign migrants	Research workers only
	Income tax exemption for expatriate allowances or expense reimbursements	-	Temporary foreign migrants	Must perform activi-ties that require special knowledge or responsibility
Denmark	Reduced tax rate on labour income (25% for 3 years, or 33% for 5 years at workers discretion)	3 or 5 years	Temporary foreign migrants (if the migrant stays beyond 3-5 years, they may be required to pay back some of the tax advantage)	Foreign scientists and key staff earning over DKK 63,800 per month
Finland	35% withholding tax on earned income, rather than state and municipal taxes	4 years	Foreign migrant who has not been resident in Finland in the previous 5 years	Employees with special expertise who earn over EUR 5,800 per month
France	Partial exemption from income tax for payments for installation costs	One-off	Foreign migrant sent by a foreign company to France	-
Ireland	Reduction in personal income tax due to earned income	-	Foreign migrant sent by a foreign company to Ireland	-
Italy	90% exemption from personal income tax on earned income; this income is also not included in the IRAP tax base	3 years	Foreign migrants or Italian nationals returning to Italy	Researchers that have carried out document-ted research activities for at least two years
	80% (women) and 70% (men) exemption from personal income tax on earned income	3 years	EU or Italian nationals returning to work in Italy after at least two years abroad, having previously lived in Italy for at least two years	Tertiary educated; employed or self-employed for at least two years or studied abroad for at least two years
Netherlands	Tax free allowance equal to 30% of earned income	10 years	Temporary and per-manent foreign migrants	Knowledge workers
	Tax free reimbursement of school fees for children atten-ding international schools	10 years	Temporary and per-manent foreign migrants	-
Poland	Deduction of 50% of income from artistic, scientific, sport or expert activities	-	-	Engaged in artistic, scientific, sport or expert activities
	Deduction of 20% of income from work involving transfer of copyright	-	-	Engaged in work involving transfer of copyright
Portugal	20% flat rate on earned income	10 years	Migrants (including Portuguese nationals) that have not been tax resident in Portugal in the previous five years	Income derived in high value-added scientific, artistic or technical activities defined by Ministerial order
Spain	Taxation under non-resident rules (reduced personal income and capital gains tax rates)	6 years	Non-resident migrants that have not been resident in Spain in the last 10 years	-
Sweden	25% exemption from income tax and SSC	3 years	Temporary foreign migrants (max. stay 5 years)	Experts/specialists, researchers, managers and other key personnel; also require some difficulty in recruiting such expertise in Sweden

(Table continued)

	Type of concession	Time restriction on eligibility for concession	Worker type	Skill requirement
United Kingdom	Remittance basis taxation of foreign sourced income	-	Non-domiciled tax residents	-
Switzerland	Deduction of expatriate related expenses	5 years	Temporary foreign migrants (max. stay 5 years)	Managers or specialists
Australia	Exemption from income tax on foreign sourced income	4 years	Temporary and permanent foreign migrants	-
Korea	50% tax exemption on earned income	2 years	Temporary and permanent foreign migrants	High-skilled working for foreign investment corporation in a high-tech field
New Zealand	Exemption from income tax on foreign sourced income	4 years	Temporary and permanent foreign migrants or returning (after more than 10 years) New Zealand nationals	Available to all migrants or returning nationals (but only once in a lifetime)
IRAP: Regional business tax (imposta regionale sulle attività produttive)				

Source: OECD (2011), Taxation and Employment, Paris, p. 138.

Belgium, Ireland, Poland and the United Kingdom there are no time restrictions on the eligibility for tax concessions.

The countries also target specific types of highly-skilled workers. Most tax concessions are aimed at permanent foreign migrants, but a number of countries also target either temporary foreign migrants, or their own nationals. Temporary migrants may be targeted to address short-run skill shortages, while equity considerations may also influence the decision to target temporary rather than permanent highly-skilled migrants. Belgium, Denmark, Sweden and Switzerland grant tax concessions particularly to temporary foreign highly-skilled migrant workers. While most countries restrict their concessions to foreign nationals, Italy, New Zealand and Portugal also target their own citizens. The 90% exemption from personal income tax on earned income in Italy is also granted to Italian researchers returning to their home country. New Zealand also grants the exemption from income tax to New Zealand nationals that have not been resident in the country for at least ten years. The French and the Irish policy target foreign migrants sent by foreign companies to their countries.

N.H.

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OECD (2007), Taxation and Employment, Paris, pp. 124 - 147.

What is New in the EU ETS?

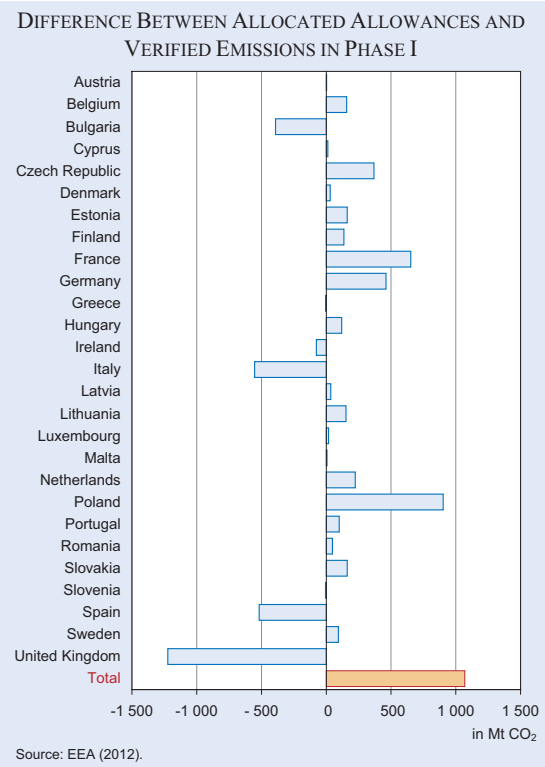
The European Union Emission Trading System (EU ETS) is the most prominent part of the European Climate Change Program (ECCP) to meet the reduction targets under the Kyoto-Protocol. The EU ETS is now seven years old and finds itself in a period of transition as it will enter the third trading period next year.

What happened so far?

By the end of the Kyoto commitment period in 2012, the EU aims to reduce its greenhouse gas emissions by 8%. Each of the participating states (EU 27 plus Iceland, Liechtenstein and Norway) has to fulfill individual emission reduction goals pursuant to the burden sharing principle. Germany, for example, agreed to reduce its emissions by 21% during the first two trading periods, whereas France was allowed to maintain its emissions at the level of 1990 [1].The EU ETS plays an important role in helping countries to achieve these targets. The ETS covers installations from 10 industries[2] which are responsible for 40% of European greenhouse gas emissions. All installations covered by the EU ETS receive European Union Allowances (EUA) according to National Allocation Plans (NAP). These EUAs are distributed at the beginning of each trading period and are destined for the respective period only. In the pilot phase, Phase I (2005-2007) of the EU ETS, at least 95% of the emission permits had to be allocated for free by the national governments. In Phase II (2008-2012) the fraction that could be auctioned rose from 5% in Phase I to 10%. Within the trading periods operators of ETS installations can buy and sell EUAs via stock exchanges (e.g. EEX in Leipzig), on OTC markets and via brokers. Beside the possibilities to buy emission allowances or invest in carbon reducing technologies, operators who fall short of permits have another opportunity to obtain additional emission allowances as of the beginning of Phase II. They can obtain certified emission reductions (CERs) or emission reduction units (ERUs) respectively by conducting emission reduction projects under the Clean Development Mechanism (CDM) or under the Joined Implementation Instrument (JI) in non-EU ETS countries that ratified the Kyoto-Protocol. In the EU ETS these additional certificates are recognized as equivalent emission reductions up to a certain amount. Germany, for example is allowed to offset 20% of its yearly emission reductions with CERs or ERUs.

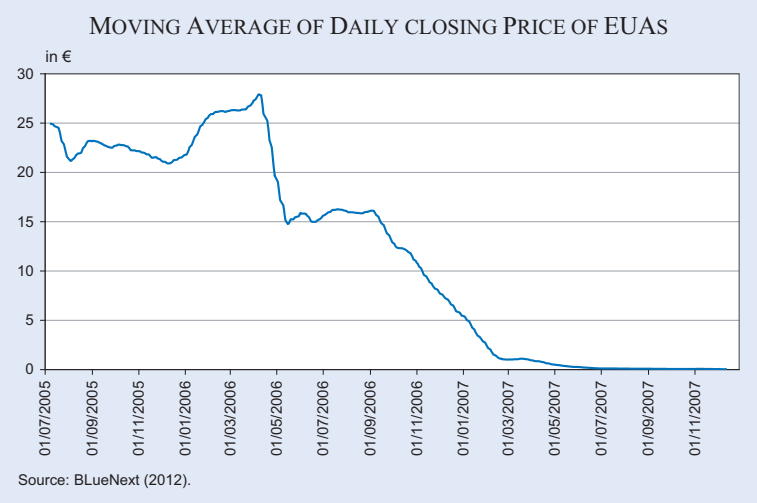
A glance at the EUA and emission data from Phase I reveals that the first trading period was affected by an excess allocation of permits. Overall, operators needed more permits than their NAP had scheduled for them in only 7 out of 27 countries. Taking all participating countries into consideration, the amount of allocated allowances was larger than the verified emissions (see Figure 1). This excess allocation in combination with the expiration of certificates after Phase I was also reflected in the price of the emission certificates, which was close to zero from April 2007 onwards until the end of the first trading period (see Figure 2). An equivalent drop in prices is, however, not to be expected after Phase II as banking of permits is allowed at the end of the second trading period.

Figure 1



[1] European Commission, EU action against climate change: The EU Emissions Trading Scheme, Brussels 2009.
[2] Industries covered: 1. Combustion installations, 2. Mineral oil refineries, 3. Coke ovens, 4. Metal ore roasting or sintering, 5. Pig iron or steel, 6. Cement clinker or lime, 7. Glass including glass fibre, 8. Ceramic products by firing, 9. Pulp, paper and board, 10. Aviation (since 30 January , 2012).

Figure 2



Throughout Phase II, the price for EUAs has fluctuated between EUR 27 and EUR 6. Ten months before the expiry of Phase II, it is still at a level (EUR 9) that is widely considered to be too low and too volatile to set the necessary incentives for the industry to invest in emission reduction technologies, as highlighted by the CEO of E.ON, Johannes Teyssen[3]. To balance over-allocation of permits, the EU Commission considers to set aside 1.4 billion in allowances[4].

What next?

On 1 January 2013 the third and longest trading period to date commences. It will last from 2013 to 2020. The two main innovations of Phase III are a unified emission cap for the entire EU ETS region (versus differentiated caps for each of the 30 participating countries previously) and a rising fraction of the allowances that have to be auctioned. The share to be auctioned initially varies from 30 to 50% depending on the industry in question. For some industries this share increases to 100% in 2020. The European-wide emission cap should decrease by 1.74% every year, which should make it possible to achieve the EU reduction target of 20% compared to the base year 1990 by 2020.

After the expansion of the EU ETS to aviation on 30 January 2012 the scope of the trading scheme will be further enlarged with the beginning of the new trading period. From 2013 CO2-emissions from installations undertaking CCS, the petrochemicals ammonia and aluminum sectors are covered by the EU ETS. The ETS then also extends to some greenhouse gases not covered previously. That leads to a coverage of 43% of total EU greenhouse gas emissions.

Although the EU ETS already incorporates special regulation and exemptions for energy-intensive industries that are prone to relocation, carbon leakage remains a problem. An ongoing global increase in the emission of greenhouse gases will only be avoided by efforts on a global scale and the introduction of a global emission trading system. In this context the development of emission trading systems in several non-EU countries seems promising. China, for example, is currently testing out a domestic ETS and a regional trading scheme is already in place in the US[5]

J.D.

[3] http://www.europeanvoice.com/article/imported/meps-to-call-for-ets-set-aside/73653.aspx (downloaded March 1st, 2012).
[4] http://europa.eu/rapid/pressReleasesAction.do?reference=IP/11/272 (downloaded March 1st, 2012).

[5] Hood, Christina, International Energy Agency, Reviewing Existing and Proposed Emissions Trading Systems, Paris 2010, pp. 73-75.

Youth Employment Measures – School Education and Training Policies

The sharp rise in youth unemployment is one of the most alarming indicators generated by the financial crisis in the rich world. Countries in which youth unemployment was already high, like Spain, have fared the worst. Figure 1 shows that, as a result of the strong deterioration in their labour market situation, the unemployment rate among young people now exceeds 30 percent in Croatia, Slovakia, Lithuania, Latvia and Greece, with this figure exceeding 40 % in Spain.

The European Commission's initiative 'Youth on the move' proposes a policy framework for reducing youth unemployment and improving youth job prospects. In this framework, policies that help young people find a first job and start their career take top priority. Such measures have proven to be very efficient in decreasing youth unemployment. Finding a first job increases young people's chances of staying in the labour force, and decreases the average time span a person is unemployed later in life. Other policies in the 'Youth on the move' framework include support for youth at risk, the provision of adequate social safety nets for young people, and support for young entrepreneurs and self-employment.

The European Commission compiled all school education and training measures in place in European countries in 2010 to assess their effectiveness. Table 1 describes these existing youth employment policies and measures covered by the European Employment Oberservatory Review. The most common measures are those to prevent early school leaving and to link education with work experience, particularly apprenticeships (e.g., through catch-up classes, second-chance schools, training schemes to bridge the gap between school education and the labour market and special training programs for the young unemployed). Broader initiatives include overall reforms to the school and vocational training systems. A few countries focus on specific sectors, on specific subjects (e.g. the science, technology, engineering and mathematics (STEM) subjects). In over a third of the countries there is a system for the recognition of non-formal learning in place (or such a system is being developed) which, although it is often seen as a tool to support adult learners, increasingly offers opportunities for young people to acquire professional certificates recognizing their skills.

Countries that are most affected by the spike of youth unemployment in particular have reacted by creating school education and training measures to tackle the problem. However, many of these programmes were introduced after 2008 or are still under construction.

School education and training policies and measures are only one pillar of the battle against youth unemployment. However, if one succeeds in helping young people to find (and keep) first jobs, this takes a significant burden off other labour market and employment-related policies, as well as the benefit systems.

S.F., L.B.

Reference

European Commission (2011), European Employment Observatory Review: Youth Employment Measures, 2010,

Figure 1

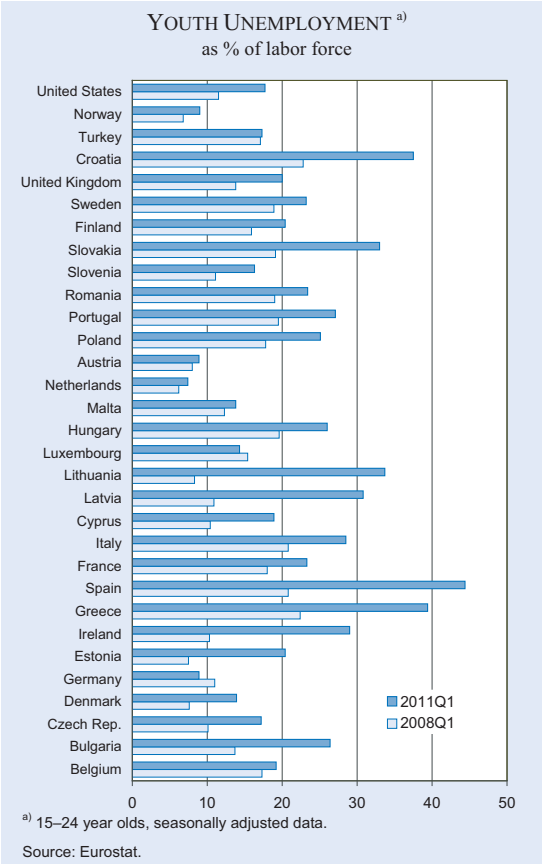


Table 1

School education and training policies

Country	Policies in place in 2010
Austria	Government programme to help the transition from education to work; vocational training guaranteed for all young people up until the age of 18
Belgium	Policies to improve the image of, and attract more pupils into, technical and professional studies; increase in the number of vocational training places and creation of new vocational training programmes
Bulgaria	School social assistance programmes (traditionally including the provision of breakfast for children in primary grades), free textbooks and other benefits in kind for poor families; provision of access to loans for students
Croatia	Agency for vocational education ensures that approximately 50 % of all professional training courses of teachers are implemented directly in relevant companies
Denmark	Special measures to support apprenticeships and unemployed apprentices
Estonia	'Action plan for growth and jobs 2008–11', focus on educational measures to support young people in continuing their studies, measures include language teaching to non-nationals already in pre-school education, developing counselling systems and introducing customised measures for children with special needs; the new Basic Schools and Upper Secondary Schools Act places more attention on increasing the number of vocational training places and creating new vocational leavers; development plan for the vocational education and training system 2009–13 aims to tighten links between vocational training and labour market
Finland	Training programmes; guidance measures for early school; guidelines by the Ministry of Employment and the Economy emphasise early intervention, the local employment agency must produce in collaboration with the young job- seeker
France	'Hope for suburbs' plan: 200 schools are piloting an academic success programme that involves intensive training and individual support for pupils; second-chance schools which emphasise practical skills and work experience lagging behind; 'Acting for youth' plan, includes a 'right to prepare for working life' and extends compulsory education from 16 to 18 years of age special measures to support apprenticeships and unemployed apprentices , specifically in 2009 'Emergency plan for youth employment'
Germany	Creation of extensive system for 'vocational preparation' which provides an entry level; 'Perspective for vocational qualification' programme; 'Jobstarter connect' programme; apprenticeship bonus is paid to 'employers who offer training to young people; Federal governments 'National pact for training and junior skilled workers' to ensure the supply of skilled workers; Federal governments qualification initiative 'Promotion through education' to increase the educational opportunities on offer
Greece	Free teaching support classes in all primary and secondary schools in various subjects; 'One start — One opportunity' programme targets young persons who dropped out of school or completed only secondary education and who have never worked or taken part in some form of training; special training programmes for tourism, ICT and construction
Hungary	Programme to create a network of regionally integrated vocational education centres (RIVEC) was launched; introduction of early vocational education
Ireland	National Training and Employment Authority (FÁS) traineeship programmes combine working towards an industry-recognised certificate or qualification with on-the-job training with a specific employer; special measures to support apprenticeships and unemployed apprentices, specifically short-term measures to support apprenticeships in an annual 11-week certified training programme
Italy	Special measures to support apprenticeships and unemployed apprentices
Latvia	Stricter controls on primary and secondary education programmes in 2008; increasing the number of vocational training places and creating new vocational training programmes; additional funding to increase the recognition and quality of vocational education and training (VET) qualifications and institutions; raising the skills of teachers in the sector and changing teaching approaches towards the flexible skills demanded by the labour market; major policy push to shift focus of the education system from humanities to natural sciences, mathematics and engineering
Lithuania	Raising the skills of teachers in the sector and changing teaching approaches towards the flexible skills demanded by the labour market
Luxembourg	Special measures to support apprenticeships and unemployed apprentices; VET reform of 118 tailor-made training schemes allowing students to obtain three types of competence-based diplomas: certificate of professional competence, professional qualification diploma, technician diploma
Malta	Employment and Training Corporation, offers a variety of schemes to facilitate the school-to-work transition of young people such as the 'Job experience scheme'; Local labour offices provide internships of up to 12 months to young unemployed persons with 120 % of unemployment benefit during the internship
Poland	'Commissioned education' programme within the 'Human capital operational' programme aims to increase the number of graduates of specialisations that are key for a knowledge-based economy

(Table continued)

Country	Policies in place in 2010
Portugal	Increase in the number of vocational training places and creating new vocational training programmes; increase the recognition and quality of vocational education and training (VET) qualifications and institutions school systems reforms; increasing the number of vocational training places and creating new vocational training programmes
Romania	The number of years of compulsory education was increased from 8 years at the beginning of Dec. to 11beginning of the december to 11
Slovenia	Training programme Absolvent - aktiviraj in Zaposli for people yet to graduate
Spain	Local police contribute to preventing early school leaving; increasing the number of vocational training places and creating new vocational training programmes; supporting the transition from school to apprenticeship training through entry-level vocational preparation programmes; programmes that facilitate the entry of early school leavers into the labour market; the 'School workshop and crafts training' programme offers training for the young unemployed followed by a work placement stage
Sweden	Special measures to support apprenticeships and unemployed apprentices; job guarantee scheme for unemployed young people who have been registered with the Public Employment Service continuously for three months.
United Kingdom	special measures to support apprenticeships and unemployed apprentices, specifically the development of the National Apprenticeship Service (NAS); the 'September guarantee', whereby all 16 and 17 year-olds must be offered an appropriate education or training route with support where needed; The 'Young person's guarantee', which requires all those reaching 10months of unemployment to take up an option from: work placement, community task force, routes into work, or care first careers or work-focused training
Iceland	Guidance measures for early school leavers; the Directorate of Labour, in cooperation with the Federation of Icelandic Industries, universities and IT firms aims at increasing the number of individuals with tertiary education in technology and sciences
Macedonia	Free textbooks for all pupils in primary and secondary schools; the 'Computer for every pupil (with Internet access)' project was implemented in primary and secondary education; VET centre was established in 2006, with large reforms being planned; special training programmes on certain professions and skills currently required by the labour market
Norway	special measures to support apprenticeships and unemployed apprentices; The Ministry of Education and Research launched the third action plan to strengthen the focus on mathematical and scientific studies; The youth guarantee states that all registered unemployed in the age group 16–20 shall be offered labour market measures after six months; 'Reform 1994' gives young people who have completed secondary compulsory education a legal right to three years' upper secondary education

Source: European Commission (2011).

Business Environment Indicators

A crucial determinant of prosperity and growth is the business environment of a country. Several indicators measure this factor including the Global Competitiveness Index (GCI) of the World Economic Forum, the Doing Business Ranking of the World Bank and the Economic Freedom Index of the Heritage Foundation. All three indicators intend to measure the business environment, albeit from a different perspective and with a different methodology. The indicators are also presumed to be closely linked to the economic performance of a country.

The GCI defines competitiveness as the set of institutions, policies and factors that determine the level of productivity of a country. It comprises institutions, infrastructure, education, health, innovation and the efficiency of goods, labor and financial markets. The GCI is mainly based on an annual survey of business executives and thus presents a qualitative picture of each country's economic and business environment. Additionally, other indicators or macroeconomic data play a role in determining each country's ranking. The indicator is divided into three sub-indexes ranging from basic requirements to sophistication factors and the weight of these sub-indexes varies across countries depending on the actual development stage.

The Doing Business Ranking of the World Bank focuses on the quality of laws and regulations affecting local business, in particular small and medium-sized companies. It is based on the responses of local practitioners who evaluate standardized case scenarios. These comprise several areas of business regulation related to the life cycle of a hypothetical company ranging from start-up and expansion, to operation and finally insolvency. In doing so, the assessment particularly focuses on property rights, access to credit investor protection, administrative burden and flexibility in hiring. As a result, the indicator focuses attention on tangible legal components and does not measure all aspects of the business environment.

The Economic Freedom Index measures the degree individuals are free to work, produce, consume and invest in any way they please. The indicator comprises 10 economic freedoms that are grouped into four broad categories and have equal weight: rule of law, limited government, regulatory efficiency and open markets. The index is mainly based on a variety of other indicators (including the World Bank's Doing Business Ranking). Moreover, qualitative information is converted into quantitative measures, as is the case with as for trade restrictions. Finally, some components, especially fiscal and macroeconomic variables, are calculated from basic economic figures.

Table 1 compares the 2012 rankings of the three indicators for the countries covered by the DICE database (mainly EU-27 and the other major OECD countries). According to the GCI Switzerland, Sweden, Finland, the United States and Germany are the most competitive countries. In the World Bank's Doing Business Ranking New Zealand, the United States, Denmark, Norway and the United Kingdom fare best. The Economic Freedom indicator portrays Australia, New Zealand, Switzerland, Canada and Ireland as the countries with most freedom. Interestingly, all indicators agree that certain countries like the United States and the United Kingdom are highly competitive, and other countries like Greece and most Eastern European countries do not offer favorable business conditions. At the same time, the differences in the factors measured by the different indicators play a crucial role for other countries and imply strikingly distinct outcomes. For example, countries like Sweden and Germany that perform well under the GCI and the Doing Business Ranking are downgraded by the Economic Freedom Index, which penalizes high tax countries. Similarly, a country like Switzerland, which is among the top countries according to the GCI and the Economic Freedom Index, is obviously highly regulated and therefore only ranges at a middle position in the Doing Business Ranking.

M.D.

References

Heritage Foundation (HF), Index of Economic Freedom (http://www.heritage.org/index/explore), accessed 23 February 2012.

The World Bank Group, Doing Business, http://www.doingbusiness.org/CustomQuery/ (accessed on 20 October 2011).

World Economic Forum, Global Competitiveness Report 2011-2012, http://www3.weforum.org/docs/WEF_GCR_2011-12.pdf, accessed 23 February 2012.

Table 1

Comparison of business environment country rankings

Global Competitiveness Index	Doing Business Index	Economic Freedom Index
Switzerland	New Zealand	Australia
Sweden	United States	New Zealand
Finland	Denmark	Switzerland
United States	Norway	Canada
Germany	United Kingdom	Ireland
Netherlands	Iceland	United States
Denmark	Ireland	Denmark
Japan	Finland	Luxembourg
United Kingdom	Canada	United Kingdom
Canada	Sweden	Netherlands
Belgium	Australia	Estonia
Norway	Germany	Finland
Austria	Japan	Cyprus
France	Latvia	Sweden
Australia	Macedonia	Japan
Luxembourg	Estonia	Lithuania
New Zealand	Switzerland	Germany
Ireland	Lithuania	Iceland
Iceland	Belgium	Austria
Estonia	France	Czech Republic
Spain	Portugal	Spain
Czech Republic	Netherlands	Belgium
Poland	Austria	Norway
Italy	Slovenia	Macedonia
Lithuania	Cyprus	Hungary
Portugal	Spain	Malta
Cyprus	Slovak Republic	Slovak Republic
Hungary	Luxembourg	Latvia
Malta	Hungary	Bulgaria
Slovenia	Bulgaria	Romania
Turkey	Poland	Poland
Montenegro	Czech Republic	France
Latvia	Turkey	Portugal
Slovak Republic	Romania	Slovenia
Bulgaria	Croatia	Montenegro
Romania	Italy	Turkey
Croatia	Greece	Croatia
Macedonia		Italy
Greece		Greece

Source: World Economic Forum, World Bank and Heritage Foundation.

The Impact of the Economic Crisis on Education

The recent crisis confronted governments with a severe conflict. On the one hand they had to reduce their budget deficits to avoid excess indebtedness. On the other, they had to promote education firstly to alleviate unemployment as a short run crisis measure and secondly to avoid the deterioration of human capital in the long run.

Against this background the second educationtoday Crisis Survey was carried out by the OECD. In this survey, mostly officials from national Ministries of Education answered questions on if, where and how the crisis had affected, or is expected to affect central education budgets. Selected results are presented in Table 1. Further information is available in the DICE Database and at the OECD.

The collected survey data shows that the recent crisis had an observable impact on reforms in the education sector and on the central education budgets of various OECD Countries. However, there is no directly clear trend in budget changes apparent, as can be seen in Table 1. Overall the data does not show budget cuts to the education system as a whole. Where public funding was reduced, this was mostly focused on specific sectors of education, which varied between the different countries. Only some governments carried out overall budget cuts. These had first off negative effects on teachers, but also on students and families.

Many governments, however, acknowledged the importance of the educational sector in overcoming the economic crisis or alleviating its impact. In several cases spending was increased in order to enhance output and efficiency or to support students, families and education providers. As a result, the education sector often benefited from stimulus measures. Where public funding was increased due to the crisis, it was particularly directed towards vocational education and training and tertiary education. Other areas, including the education of students above 25 years of age, pre-primary, primary and secondary education, only profited from stimulus measures in a few countries.

Furthermore, educational reforms were accelerated and expanded especially in the sectors of vocational education and training and tertiary education. The rationales cited for this were to alleviate unemployment, to respond to increasing demand in education, to lay the foundation for future growth and to foster innovation.

Pre-primary education: With the exception of Hungary and Turkey all countries expanded their funding of the pre-primary education sector, though the expansions were not attributable to the crisis. These steps show the government's acknowledgement of the important long-run effects of early education. Only Hungary cut its budget because of the crisis.

Primary and secondary education: All countries except Spain increased or planned to increase their funding unrelated to the crisis in order to foster the positive educational long-run effects. However, Denmark, Hungary and Ireland had to subsequently reduce their funding as a result of the crisis. The aggregate effects on respective national budgets are not clear.

Tertiary education: At this sector the picture is more diverse. Budget cuts as well as increases were carried out. Due to the crisis the demand for tertiary education increased. In response to higher demand, four countries increased their public funding, but higher application numbers could not be converted into higher enrolment rates everywhere. Furthermore, Hungary, Ireland and Slovenia were obliged to cut their funding due to budget constraints.

Vocational education and training: The picture of this sector portrait mostly increases in the central education budgets. As a consequence of the crisis the demand rose in this sector too, whereas private financing decreased. To utilize the positive short-run effects of education, such as alleviating unemployment, six countries stepped up their public financing attributable to the crisis. Only one country reduced its funding directly as a crisis measure.

Students above 25 years of age: In the adult education sector not many changes were made in response to the recent crisis. Only Finland clearly increased its budget, whereas Denmark, Hungary and Ireland both increased and decreased their funding attributable to the crisis. Most other countries increased their public spending, which was non-crisis related.

A. H.

Reference

Damme, D.V. and K. Karkkainen, OECD Education today Crisis Survey 2010: The Impact of the Economic Recession and Fiscal Crisis on Education in OECD Countries, *OECD Education Working Papers* no. 56, Paris 2011.

Table 1
Impact of the Economic Crisis on Central Education Budgets in OECD Countries between 2007 and 2010 [a)]

	Pre-primary education		Primary education		Lower-secondary education		Upper-secondary education		Tertiary education		Vocational education and training		Students above 25 years of age	
	Budget 2007-2010	Attributable to the crisis	Budget 2007-2010	Attributable to the crisis	Budget 2007-2010	Attributable to the crisis	Budget 2007-2010	Attributable to the crisis	Budget 2007-2010	Attributable to the crisis	Budget 2007-2010	Attributable to the crisis	Budget 2007-2010	Attributable to the crisis
Austria			–		–		–		↑	N				
Belgium (Flanders) [b)]	m	m	↑/↓	m	m	m	↑/↓	m	↑	m	↑/↓	Y		
Czech Republic	↑	N	↑	N	↑	N	↑	N	↑	N				
Denmark	–		↑/↓	Y↓	↑/↓	Y↓	↑/↓	Y↓	↑	Y	↑	Y	↑/↓	Y
Finland	–		↑	Y	↑	Y	–		↑	N	↑	Y	↑	Y
France	↑	N	↑	N	↑	N	↑	N	↑	N	m	m	m	m
Germany		m	m	m	m	m	m	m	m	m	m	m	m	m
Greece	↑	N	↑	N	↑	N	↑	N	↑	N	↓	N	↑	N
Hungary	↑/↓	Y↓	↑/↓	Y↓	↑/↓	Y↓	↑/↓	Y↓	↑/↓	Y↓	↑/↓	Y↓	↑/↓	Y
Ireland	–		↑/↓	Y↓	↑/↓	Y↓	↑/↓	Y↓	↑/↓	Y↓	↑/↓	Y	↑/↓	Y
Italy	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Luxembourg	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Nether ands	↑	N	↑	Y	↑	Y	↑	Y	↑	N	↑	Y	↑	N
Poland			↑	N	↑	N	↑	N	↑	N	↑	N	–	
Portugal	m	m	m	m	m	m	m	m	↑	N	m	m	↑	N
Slovak Republic	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Slovenia	↑	N	–		–		↓	Y	↑/↓	Y↓	↓	Y	↑	N
Spain	↑	N	↑	N	↑	N	↑	N	↑	N	↑	N	↑	N
Sweden									↑	Y	↑	Y		
United Kingdom	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Norway [c)]	↑	N	↑	N	–		–		↑	Y	↑	Y	m	m
Switzerland [d)]	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Turkey	↑/↓	N	↑	N			↑	N	↑	N	↑	N		
Australia	↑	N	↑	Y	↑	Y	↑	Y	↑	Y	↑	N		
Canada	m	m	m	m	m	m	m	m	m	m	m	m	m	m
Japan	–		–		–		↑		–		↑/↓			
New Zealand	↑	N	↑	N	–		↑	Y	↑	Y	↑	Y	↓	N
United States	m	m	m	m	m	m	m	m	m	m	m	m	m	m

↑ = Clearly increased. – ↓ = Clearly decreased. – ↑/↓ = Both increased and decreased. – = Remained constant. – Y = Yes. – Y↓ = Yes, but only the decrease. – N = No. – m = missing. – Boldin = Influence of the crisis. – Empty cells: Data not applicable.

[a)] In comparison with the trend observable before 2007; Central = national and/or state level. – [b)] Primary education corresponds both primary and pre-primary education, upper-secondary education corresponds both lower-secondary and upper-secondary education and vocational education and training correspond training centres. – [c)] Vocational education and training forms part of upper-secondary education. – [d)] Switzerland indicates that so far no major impact of the crisis on education budgets are identified, although some single cases exist especially regarding tertiary education.

Source: Damme and Karkkainen, (2011).

New at DICE Database

Recent entries to the DICE Database

In February and March 2012 the DICE Database received about 200 new entries consisting partly of updates of existing entries and partly of new topics. The institutional field "Business and Financial Markets" was also restructured. And the theme "Banking" is now represented in a separate division with 7 subdivisions.

The new or updated topics include:

- Status of the Basel II and III Adoption
- Deposit Insurance Systems and Guarantee Arrangements
- Inflation Targeting of Central Banks
- Regulation of Emissions Trading Systems
- Policy Instruments to Address Pollution and to Protect the Environment
- Unemployment Benefit Schemes
- Average Working Time of Employees
- Regulation of Migrant Entrepreneurship and Self-employment
- Business, Corporate and Personal Tax Rates

Forthcoming Conferences

CESifo Area Conference on Public Sector Economics 2012

12 April – 14 April, in Munich

This annual area conference aims to give an overview of the current research undertaken by members of the Public Sector Economics area of the CESifo network and to stimulate interaction and co-operation between area members.
Keynote Lecture by Pierre Pestieau (Université de Liege): The Public Economics of Increasing Longevity

Scientific organizer: Rick Van der Ploeg

CESifo Area Conference on Employment and Social Protection 2012

27 April – 28 April, in Munich

The purpose of the conference is to bring together CESifo members to present and discuss their ongoing research and to stimulate interaction and co-operation between them. The papers presented deal with any topic within the domains of employment and social protection.
Keynote Lecture by Ronnie Schöb (FU Berlin): Identity and Unemployment

Scientific organiser: Kai A. Konrad

CESifo Area Conference on Global Economy 2012

25 May – 26 May 2012, in Munich

This conference offers members of the Network's Global Economy area to present their current research and aims to stimulate interaction and co-operation between area members. The papers to be presented cover a wide range of issues including trade, international finance, migration, global environmental issues and many other topics.

Scientific organisers: Peter Egger, John Whalley

New Books on Institutions

From Optimal Tax Theory to Tax Policy
Robin Boadway
MIT Press, Cambridge, Mass., London (2012)

The Continuing Evolution of Europe
Thiess Buettner and Wolfgang Ochel (eds.)
MIT Press, Cambridge, Mass., London (2012)

The Green Paradox
Hans-Werner Sinn
MIT Press, Cambridge, Mass., London (2012)