

Is Independence Possible in an Interdependent World?

Scotland vs. the UK's Participation in the European Economy.

Andrew HUGHES HALLETT



DEPARTMENT OF EUROPEAN ECONOMIC STUDIES

Bruges European Economic Policy Briefings

30/2013

About the author:

Andrew Hughes Hallett is Professor of Economics and Public Policy in the School

of Public Policy at George Mason University and in the School of Economics at St

Andrews University in Scotland. Previously he was Professor of Economics at

Vanderbilt University and at the University of Strathclyde in Scotland. He is a

graduate of the University of Warwick (UK) and London School of Economics,

holds a Doctorate from Oxford University. He has been Visiting Professor and

Fulbright Fellow at Princeton University, Bundesbank Professor at the Free

University of Berlin, and has held visiting positions at the Universities of Warwick,

Frankfurt, Rome, Paris X, Cardiff, Copenhagen and the Kennedy School at

Harvard. Beyond the academic world, he has acted as consultant to the World

Bank and the IMF; also the Peterson Institute for International Economics; and to

the UN, OECD, the European Commission, the European Central Bank, to various

governments and central banks. He has been a member of the Scottish Council of

Economic Advisors since 2007.

Address for correspondence:

Andrew Hughes Hallett: ahughesh@gmu.edu

Acknowledgements:

This paper was written in the framework of the 12th Annual European Economy

Lecture that took place at the College of Europe in Bruges on 23 October 2013. The

usual disclaimer applies. The views expressed in the briefing are those of the

author only.

Is Independence Possible in an Interdependent World?

Scotland vs. the UK's Participation in the European Economy

BEEP n° 30

Andrew Hughes Hallett

Abstract:

Many commentators have criticised the strategy used to finance regional governments such as the Scottish Parliament – both the block grant system and the limited amount of fiscal autonomy devised in the Scotland Act of 2012. This lecture sets out to identify what level of autonomy or independence would best suit a regional economy in a currency union, and also the institutional changes needed to sustain those arrangements. Our argument is developed along three lines. First, we set out the advantages of a fiscal federalism framework and the institutions needed to support it, but which the Euro-zone currently lacks. The second is to elaborate a model of fiscal federalism where comprehensive powers of taxation and spending are devolved (an independent Scotland and the UK remain constituent members of the EU and European economy). Third, we evaluate the main arguments for the breakup of nations or economic unions with Scotland and the UK as leading examples.

We note that greater autonomy may not result in increases in long run economic growth *rate*, but it does imply that enhancing the fiscal competence and responsibility of regional governments would result in productivity gains and hence higher levels of GDP per head. That means the population is permanently richer than before, even if ultimately their incomes continue to grow at the same rate. It turns out that these improvements can be achieved through devolved tax powers, but not through devolved spending powers or shared taxes.

Keywords: economic federalism; policy centralisation and decentralisation; currency union; withdrawal from the European Union.

JEL-codes: F15; F36; E6; H21; H87.

Summary

Since the financial crisis of 2008 the Eurozone has become a de facto emerging economic federation. However, the disastrous performance since the debt crises of 2008-12, has revealed the EU to be an incomplete union. The real difficulty is that, despite much technical analysis and political advice on how specific policies should be designed and conducted within the existing framework, there is no conceptual framework to guide the policymaking process. Some forward thinking is needed here.

What is clear from the detailed evidence of events since 2008 is that the crisis has had multiple causes: broadly classified as liquidity shortages due to financing stops or capital flow reversals; trade or balance of payments imbalances; and fiscal imbalances (excess deficits and debt). These imbalances vary in importance and timing across countries. The implication is that the policy institutions and regulation have to be able to counteract the consequences of all such imbalances; prevent one kind of imbalance morphing into another, and remove excessive imbalances. The EU needs better-equipped institutions rather than specific policies in a world where countries have different objectives, different priorities and different response rates.

On top of this, there are forces in any federal system for the further decentralization (devolution) of policy making. Economic theory on fiscal federalism states: in multilevel governments, each level of government (including central government) will try to maximise social and economic welfare within its own jurisdiction. That would necessarily provide a higher level of economic and social welfare than can be gained in a regime in which central government provides uniform policies/public goods for all – since, having additional policy choices at their disposal, regional policymakers can always choose to replicate the central government's common policies if they wish to do so. Hence, decentralisation can always produce better and more efficient outcomes for all – subject only to not having devolved so far as to create diseconomies of scale or excessive spillovers in the delivery of public services. Two examples:-

The UK in the EU, outside the Eurozone: Being outside the currency union and the institutions needed to support that union, the UK's concerns have to do with the poor functioning and infringements of the single market (principally the financial sector and services), and the further integration that comes with EU membership (political union, fiscal union, banking union, the social chapter, immigration).

The distance between the UK's expectations and the centre of gravity of European policy, the fractionalising of political life that follows, and closer relations to the rest of the world, all help to raise the pressure to "decentralise" from the EU.

Scotland in the UK union: The Scottish Government currently grapples with the challenge of supporting economic activity in the face of severely constrained public finances determined in London. This creates a debate over how much autonomy Scotland should be permitted in order to address its problems. This argument forces a distinction between a funding mechanism in which Scottish ministers are held accountable (in a narrow accounting sense) for accepting and spending a defined stream of money on a pre-specified set of objectives; vs. a regime in which the Scottish Parliament has the ability and responsibility to raise and spend the sums of money they think would most improve economic performance and the standard of living of its citizens. In contrast to the UK in the EU, Scotland's differences with the UK are largely a matter of taste, priorities and culture: a preference for social democracy, for local democracy, for a better economic performance that currently available, and a more cohesive society – in short a case of preference incompatibilities within the UK union, rather than insufficient flexibility.

Conclusion: Unlike the popular song, breaking up is not hard to contemplate. Far from being abstract, the conditions for when it becomes a possibility are easily satisfied and are generally in evidence where there are separatist movements.

What the EU needs, therefore, is robust institutions rather than policies: a) to give members the sense of owning an impartial, independent economic framework they themselves help operate; b) to introduce a framework in which those who would otherwise leave have a say in the decisions as well as those potentially left behind; and c) to create a broader, more accommodating set of institutions within which economies with different aspirations, priorities and market responses can perform successfully without creating tensions or costly spillovers, yet not find themselves so restricted that they could do better outside.

It is obvious that the last is the most important conclusion. Europe, and the UK for that matter, needs to recognise that, if they wish to preserve their unions, they have to make it worthwhile for their members to remain members in terms of those members' own goals and priorities. That is, to be incentive compatible. It is significant that, despite protests and instability in Spain, Greece and Cyprus, it was the Eurozone's policies and inability to complete the required institutional and financial arrangements which came in for real criticism. Those protests always stopped short of demands to leave the Euro or ECB – institutions widely seen to be independent, impartial, and where necessary accommodating.

1. INTRODUCTION

The European Union, and more particularly the Euro-zone, has always been a "would be, maybe" federal union; and since the financial crisis of 2008 it has become a de facto emerging economic federation However, the weak economic performance since the introduction of the Euro and the disastrous performance since the debt crises of 2008-12, more evident in the extreme difficulty of getting out of that crisis, than in the fact that it fell into it in the first place, has revealed the EU to be an accidental and very incomplete economic union. The real difficulty, this lecture argues, is that despite reams of technical analysis and political advice on how specific policies should be designed and conducted within the existing framework, there is no conceptual framework to guide the policymaking process; and little coherence within or between the existing EU/Eurozone institutions (such as they are). Some forward thinking is needed here. This lecture is concerned with the conceptual framework and questions of institutional design.

In the delegation literature, principally that aimed at monetary policy and the design of central bank operating procedures, but also in the literature on principal-agent models, the real distinction is between instrument independence vs. target independence. In the former, regional decision makers (or decision makers delegated to manage a certain sector of the economy) act as agents for the central/federal government authorities and have no responsibility other than being accountable for having reached the criteria that others have set for them and at least cost — without wasting resources, creating additional uncertainties or absconding with the money. They have no responsibility for designing those criteria; or for deciding what would be the best criteria, the best targets, and the best priorities; or whether the policymakers in question have been allocated the most effective policy instruments to do the job.¹

¹ The Euro economies actually lie between target and instrument independence, with joint responsibility for selecting some criteria; the UK government has close to target independence, while Scotland has effectively zero instrument independence.

Thus, under instrument independence, agents have the freedom to use their policy instruments as they see fit; and are held accountable for having done so most efficiently under criteria assigned by the principal. But they are not responsible for the overall performance of their own economy as such, or the wider economy of which it is a part, or even whether those criteria are consistent with reaching the best possible performance. In the absence of careful coordination, a coincidence of preferences, and detailed knowledge of that region's exact circumstances or the spillovers from regions nearby, centrally set criteria will not secure the best performance locally.

Target independence is quite different. Here regional policymakers set both the criteria and the priorities for a good performance and pick the instrument values so as to produce the best performance for themselves within the wider economy, taking into account local conditions, preferences and spillovers. There is still a potential coordination problem if there is a conflict between regional optimality and optimality in the wider economy. But that is always the case, even for a fully independent economy within the world economy. Some safeguards may need to be inserted to deal with that problem; but we would need to do so anyway to ensure that we benefit from the spillovers from a better performing federal economy, as well as from the better performance in the regional economy. In this set up, policymakers are held accountable for their instrument settings, and held responsible for creating a better performance in their own economy. And they have the capacity to create better outcomes because a wider set of choices can be made in a problem which is otherwise the same as in the instrument independence case.

To my knowledge, no-one has ever used the distinction between instrument independence and target independence in the area of fiscal policy; or used it to define and mark the differences between systems with full fiscal autonomy ("devolution max") and those with partial autonomy but still heavily dependent on grant revenues, assigned tax revenues, or centrally determined shares of domestically raised taxes. Examples of the former, with target independence and de facto devolution max include Canada, some Spanish and Italian regions, the Channel Islands or Isle of Man; examples of the latter are Australia and Germany with a reconciliation of regional revenues through the Australian grants commission and Germany's *Finanzausgleich* mechanism.

Scotland, a specific example in an existing currency union: The Scottish Government currently faces the challenge of supporting economic activity in the face of severely constrained public finances determined in London. This has opened up a debate with the UK Government over how much autonomy Scotland should be granted in order to be able to address the problems she faces.

This argument forces us to draw a clear distinction between a funding mechanism in which Scottish ministers are held accountable (in a narrow accounting sense) for accepting and spending a defined stream of money on a defined and pre-specified set of objectives; vs. a regime which gives the Scottish Parliament both the capacity and the responsibility to raise and spend the sums of money they think would most improve the performance of the economy and standard of living of its citizens. The referendum on the latter option, implying a withdrawal from the UK or a radical increase in autonomy, will be held in September 2014.

The UK in the single market, outside the Eurozone: The UK position on a possible withdrawal from the EU is rather different. Being outside the currency union and the institutions needed to support that union, the UK's concerns have to do with the poor functioning and infringements of the single market (principally in the financial sector, services and external trade/investment), and the further integration that comes with EU membership (political union, fiscal union, banking union, the social chapter and immigration). The distance between the UK's expectations and the centre of gravity of European policy, the fractionalising of political life that follows, and closer relationships to the rest of the world that raise the pressure to decentralise from the EU, are the main issues. A referendum to withdraw from the EU is tentatively set for 2017.

2. INSTITUTIONS BEFORE POLICIES

2.1 Private vs. public sector risk

The links that convert private sector and foreign debt into public debt, or vice versa, can be very strong and will have important implications for the choice of the financial regulation system and/or the fiscal consolidation policies.

We start from the national accounting identity: S - I = (G - T) + X - M, where S = private sector saving, I = domestic investment, G - T = budget deficit (public spending less revenues) and X - M = current account imbalance. This identity links external imbalances (X-M) and private financing imbalances (S-I) to the government's fiscal imbalance (G-T). It shows how imbalances on the right hand side can lead to a banking crisis in the private sector; **or** how external imbalances, even in the absence of fiscal irresponsibility, can lead to expanding public debt, capital outflows and a liquidity crisis in which private debt is replaced by public debt. In other words, S - I shows when we need financial regulation; G - T when we need fiscal control; and X - M when we need competitiveness reforms (or monetary policy to shift the Euro's external value).

If, for example, a current-account deficit appears for any reason (X - M < 0; Portugal or Italy), then either the government has to run a budget deficit (G-T > 0) or private savings must fall relative to investment (S - I < 0) to restore equilibrium. But private savings will tend to rise (with precaution, debt redemption), and investment to fall in a recession: S - I > 0. So the more likely outcome is that the government's budget deficit rises. Indeed, if the private sector has been carrying too much debt, it will be the first to deleverage in a downturn – creating a banking crisis because savings are withdrawn to pay down that debt, rather than invest.

This causes a loss of liquidity in the banking system and a potential banking crisis, which leads to even larger fiscal deficits to rebalance economic activity, or to smooth consumption or tax revenues and replace the savings in banks. At that point, excess private debt becomes excess public debt. Demand for assets/bonds in problem countries will collapse, especially in a currency union where asset sales can be sent to low-risk countries (such as Germany, Finland, Netherlands) without cost or exchange rate risk. Government bonds in the problem countries are then no longer capital risk free, especially if a prospective bailout looks unlikely or too small. In such cases, the *expected* value of a euro held in one place is not

² Alessandrini et al (2013) find that the S-I and X-M gaps account for at least half the Euro's financial crisis of 2008-12, while Jorda et al (2013) argue that the S-I imbalances were the largest cause of excess borrowing in advanced economies since 1870.

necessarily the same as its value in another – leading to a run on the deposit base, rising spreads/risk premia and increased borrowing costs.

One can extend this example by asking, how did the private sector get indebted in the first place? If an economy enters an era of historically low interest rates, a global savings glut, or on joining the Euro (Spain, Ireland), then savings will fall relative to investment in an asset bubble or domestic credit boom (US, UK, Ireland) which turns S-I negative. This is not a problem if, or as long as, the credit bubble produces a matching trade deficit and capital inflow (X - M < 0): Portugal or Spain until 2008.

But if it does not; or if the credit/asset bubble bursts; or the capital inflows dry up; or if there is a deposit run for any of the reasons above, then there will be a financing stop, a liquidity crisis and fiscal deficits have to increase (G-T>0) to provide liquidity to the banks. This is the story in much of the Euro area.

This sequence of events provides the links by which poor macroeconomic fundamentals and persistent imbalances elsewhere in the economy can easily translate into fiscal deficits and a crisis in the banking sector, even if there has been no fiscal irresponsibility at all (Ireland, Spain). Fiscal irresponsibility (Greece, say) simply adds additional fiscal deficits. The implication is that financial regulation has to be able to cover the consequences of **all** these imbalances; **and** to prevent one kind of imbalance morphing into another, **and** to remove any excess imbalances. The lesson is that the EU needs better institutions rather than specific policies to achieve that in a world where countries have different objectives, different priorities and different time frames.

A couple of recent examples may fix the point. First: why is Portugal starting to behave like a northern/core Euro-economy, while the Netherlands is beginning to look more like a southern peripheral economy? The answer is that Portugal has started to repair her X – M deficit, after the S – I financing gap had been rebalanced at a new lower level using troika loans, OMT promises, and a great deal of austerity. The Netherlands, by contrast, is suffering a financing stop induced by deleveraging after a property boom while the external X-M gap remains as it was. That means a very stubborn fiscal deficit, and austerity is needed.

Second: what distortions emerge from the German current account surplus? That surplus is now 6% of GDP, the budget is nearly balanced, so the S-I savings surplus is about 6% of GDP. There are many possible reasons: i) domestic investment may have been kept low by repression in the domestic economy (low relative prices and incomes); ii) import compression in the rest of the Euro area due to austerity; iii) unrequited competitive real devaluations by Germany; iv) the Euro lower than it would otherwise have been, switching exports to the rest of the world; v) safe-haven inflows from the rest of the Euro area. Any of these factors would cause excess savings. In fact the German savings surplus has only fallen ½% of GDP since 2007, while the fiscal deficit fell by 3%, implying that her savings surplus fell to 6% (it used to be higher) – slowing growth, and signaling an early start to deleveraging in the finance sector. The counterpart (rest of Euro area) external surplus has risen 21/2% of GDP, but only since 2011, while fiscal deficits have fallen about 3% on average. Deleveraging there has therefore only just started and remains small. Hence strong financing flows will still be needed to allow the necessary corrections to happen; and the fiscal deficits will remain very stubborn, and growth slow, for some time to come.

2.2 Fiscal Control and Fiscal Rules

Fiscal rules are defined as permanent constraints on fiscal policy achieved through numerical limits on budgetary aggregates. The five types of fiscal rule are:

a) Balanced Budget Rules: Balanced budget rules establish targets to achieve a structural budget balance each fiscal year. By focusing on structural budget balance, adjusted for economic cycles³, the government has some ability to run a deficit during a recession, rather than cut spending, provided financing is available on affordable terms. But deficits incurred at one point have to be paid off by surpluses generated later, to achieve a balanced budget across the cycle.

³ A structurally balanced budget is one balanced across the cycle as a whole. The difficulty is to compute this structural measure in real time. In practice, this cannot be done accurately enough to prevent misjudging excessive deficits: Hughes Hallett et al 2012.

Some rules, such as the UK's budget balance rule, specify that the government balances its budget on a forward looking basis. The UK's balanced budget rule or "fiscal mandate" requires the forecast structural budget to be in balance or surplus by the end of a rolling five-year forecast horizon.

b) **Debt Rules:** Debt rules are, by definition, most effective in limiting government debt to a specific level. A government with a debt-to-GDP ratio below the target level would have scope to undertake expansionary fiscal policies in the short to medium term. A government which runs high deficits as it approaches the debt ceiling where debt becomes unsustainable, may find itself unable to adjust to meet the target, and overshoot it instead of returning to target.

In the latter case, a strong and credible enforcement mechanism will be needed to deal with the possibility that the government's ability to keep to the rule breaks down due fiscal fatigue, political fatigue, or large negative shocks of the kind seen in the financial crisis of 2007-8.

In the former case, where the debt ratio is low, there is a temptation to undertake expansionary policies that become unsustainable if pursued for too long. To prevent that, a debt rule will automatically impose a minimum primary surplus or maximum primary deficit. This allows us to set a self-stabilising rule with a target value and a ceiling below which debt may fluctuate. For example, the EU's fiscal compact requires that member states with debt-to-GDP ratios above 60% seek to reduce the ratio by 1/20th the amount it is in excess of the target each year.

What level of debt should these rules aim for? The most recent literature shows the level of debt that maximizes growth will depend on what we choose to spend our deficits on: the marginal productivity of public capital, including infrastructure, is the crucial issue⁴.

c) Expenditure Rules: Expenditure rules set limits on total, primary or current spending. This limit may be set in aggregate terms, or as a growth rate, or as a percentage of GDP. Such rules can limit the size of government in the

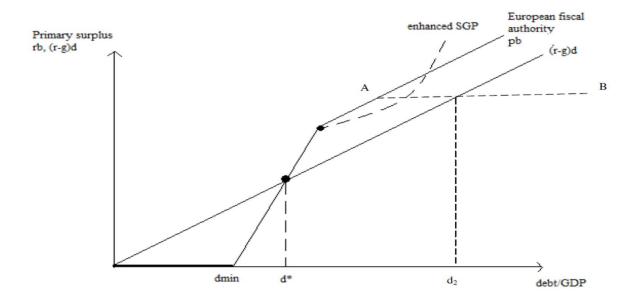
⁴ See Checherita et al (2013) for the details and an explanation.

economy, but may not achieve sustainable public finances unless another rule also raises revenues at the same time – which means that taxes increase pro-cyclically in a recession since public spending tends to rise in bad times. The Euro-zone's austerity policies have illustrated how difficult it is to operate such rules effectively.

- **d)** Revenue Rules: Revenue rules may define a floor or ceiling to government revenues. But again, since tax revenues are endogenous to the cycle, and typically more volatile than spending, governments have found great difficulty in operating such rules in practice.
- e) The Golden Rule: The Golden Rule of debt financing specifies that only spending on public investment and capital may be financed by borrowing and hence debt; the idea being that such investments generate a identifiable rate of return. This kind of rule may be looser than the rules above, but recognises that the composition of public spending matters for development and growth and should not be overly restricted. This kind of rule is used in Germany, and was the rule in the UK until the 2008 financial crisis.

2.3 Sustainable fiscal rules: an example

Standard results in the literature show that a country's debt ratio will stabilise when pb=(r-g)d: where $pb=primary\ surplus$, r the average interest rate payable on debt d, and g the average growth rate in national income. In other words, the primary surplus/deficit must always be above some threshold value defined by r, g and d. Put differently, the fiscal compact does not guarantee sustainable public finances: a structural deficit $pb+rd \ge -0.5\%$, instead of (2r-g), is likely to be too lax in bad times (g<0), but too tight in good times (g>0). An example of how the primary surplus needs to behave to ensure sustainable public finances at each debt level is given in the following diagram (with outcomes under the fiscal compact's $1/20^{th}$ rule, and under fiscal fatigue: AB).



2.4 Fiscal Councils and the Banking Union

A Fiscal Council's task would be to provide informed and independent assessments of the fiscal position and general prospects for the national economy, covering the outlook for public finances, financial conditions, and the main targets of economic policy. This would bring the fiscal policy framework back to a system of rules that safeguard solvency and efficiency, without the government losing the freedom to set out and achieve its own priorities and targets. More importantly it would be *forward looking*. And by entrusting the analysis and judgment of sustainability to an independent commission, it would solve the basic credibility problem of any fiscal regime; namely that governments are left to judge the quality of their own policies, especially those with financing implications that last long after the next election or elections. In short, a proper balance between long run sustainability and the short-run obligations and opportunities offered by fiscal policy, is preserved by the independence of the body making the assessments from political pressures.⁵

⁵ The establishment of fiscal councils is now required as part of the EU-IMF rescue plan for several indebted Euro area economies. Many OECD countries have set up and operate fiscal councils: inter alia, Australia, Belgium, Canada, Chile, Denmark,

Credibility, Commitment and Monitoring: The rationale usually offered for a fiscal council is as a mechanism to increase the credibility and commitment to sustainable fiscal policies, and to provide a politically impartial monitoring process which is available to the economy as a whole. Thus, at one end of the scale, the Swedish Fiscal Policy Council has an explicit mandate to comment on, and where necessary recommend improvements to current fiscal policies, and the extent to which they will reach the goals and priorities the Government has set for itself; and whether there is a risk of creating unsustainable levels of public debt or extreme tax liabilities in the process. The Swedish council may also examine the implications for other targets such as growth, employment, income distribution and structural reform programmes.

It may also suggest other policies that would, in its judgment, reach those targets better or faster; and it may (and does) comment on the effectiveness of the Government's communications practices (the explanation of, and justification for, the policies being pursued).

At the other end of the scale, the UK's Office of Budget Responsibility (OBR) is required to provide independent forecasts of the future fiscal revenues and budget position, including the implications for growth and employment that may affect the fiscal position. But it is forbidden from examining or commenting on the other targets of economic policy or the merits of the other policies that might be used to reach them. The accent here is on forecasting rather than policy evaluation or policy efficiency. *Neither* agency is involved in policy advocacy however. In between, there are many other fiscal policy councils that vary in their remits and to whom they are accountable; and in staffing and how they handle disputes over impartiality in their advice.⁶

Germany, Hungary, Ireland, Portugal, Slovakia, Slovenia, Sweden, the UK and the US.

⁶ It is important to note that independence, in this context, involves not only physical separation from government agencies responsible for economic policy, but also free access to the data, models and information used by government and by outside agencies. It is not just a matter of political or personal independence.

The first function of a fiscal policy commission is therefore to forecast future fiscal outcomes, to monitor current performance, and to analyse the sustainability and feasibility of the main targets of the policymakers. That is: it has to operate as a second opinion, and introduce an enforcement mechanism to underpin the credibility and commitment to the chosen policies.

Much has been made of the analogy with the need for independence and credibility by central banks in the making of monetary policy. These characteristics are needed in fiscal policy too; this sector discusses how they can best be achieved. But the situation is actually rather different for three reasons: a) a fiscal policy commission has no executive authority, and ultimately no sanctions on misbehaviour; b) it is most likely to have a wider remit, but may not engage in policy advocacy; and c) in order not to add to any democratic deficit, it must restrict its analysis or evaluations to be within the targets and priorities set by the government of the day.

Specific Tasks: Traditional monitoring procedures for fiscal policy are based on partial rules that are backward looking. In so far as monitoring is about anchoring or reassuring expectations of the future, this is a defect. They do not imply any specific pressure to modify policies in the light of predictable problems in the future. An independent fiscal policy commission should therefore be responsible for: a) reviewing the fiscal outlook for the government and the public; b) reviewing the future revenues likely to be available; c) estimating key *structural* imbalances; d) estimating the likely consequences of current spending and taxation plans, including those implied by changing demography, pensions and foreign factors; e) giving advice on correcting any imbalances.

These tasks should therefore be designed to provide an informed and impartial assessment of the fiscal position, its implications for economic performance and the future state of public finances. More important, and this is the big innovation, it would be explicitly forward looking. All this can be done without imposing on the government's preferences, priorities and targets. However, a problem of enforcement remains. A fiscal policy commission can only ramp up the pressure to conform to a sustainable set of fiscal policies through public censure – but significantly so if the commission itself has genuine authority and credibility. But ultimately a determinedly delinquent government would have to be restrained some

other way, for example through the graduated "chapter 11" process administered by the commission discussed below.

In this scheme, it is clear that the responsibility for the choice, design and execution of fiscal policy remains with the government. Nevertheless, the commission's warnings would force that government to argue openly how they are going to maintain sustainable policies and any necessary adjustments, signalling that the responsibility for the outcomes is theirs to achieve. Nonetheless there remains a trade-off between designing an organisation restricted to forecasting likely outcomes, and an organisation with a wider remit to monitor and comment on the effect of fiscal policy on other targets of economic policy or macro-imbalances. In either case, the point is that improving the credibility and expectations of favourable outcomes will strengthen the power of the government's preferred fiscal policies and the likelihood that the targets will be achieved.

A Wider Remit? Calmfors and Wren-Lewis (2011) argue that a fiscal council is needed in order to monitor a government's adherence to the rules required to maintain a sustainable level of debt. Certainly having a sensible debt target, chosen on a multiperiod basis rather than period-by-period, implies certain limits need to be imposed on the primary deficit. We show how to do that in Checherita et al (2013). But there is still the problem that governments may fail to keep debt within sustainable bounds, or that they become overwhelmed by financial shocks and rising interest rates as happened in the financial crisis of 2008-12. Hence the problem is one of enforcement. Fiscal policy councils are designed to help with that, creating maximum peer pressure for enforcement. But it would be wise to supplement that with coercive rules for use in extreme cases, and define what may be regarded as the "safe zone" for the public debt level to operate in. The implication is that a fiscal council should examine compliance with the fiscal rules needed to ensure sustainability.

Beyond that, the Swedish and Danish fiscal policy councils, for example, have found it important to evaluate the impacts of fiscal policy on growth, job creation, investment and the distribution of income. The Swedes have also underlined the importance of taking a top down approach: that is a complete model approach in order to ensure consistency and credibility in their evaluations. They also consider alternative policies and undertake normative exercises to investigate

what policies might improve the achievement of the government's targets. I examine this possibility in Hughes Hallett (2013), and conclude that to give such a remit is probably unwise because it risks politicising (or giving the impression of having politicised) the commission's remit. That would undermine the commission's reputation for credibility and effectiveness.

The Fiscal Policy Council Needs Oversight of Banking Resolution and Regulation: A Fiscal Council should play a critical role, unrecognised so far in the literature, in the regulation of financial services or banks and in the resolution of financial institutions in trouble. This role stems from link between private financial imbalances, internal or external, and public sector fiscal imbalances, as discussed above.

This may appear irrelevant to fiscal policy. But it is not for sustainability, for two reasons: a) establishing a *feasible* public debt management and resolution scheme requires us to separate private risk from public risk (we may wish to bail out the former as a liquidity problem, but not the latter as a solvency problem); and b) because the governance arrangements have to recognise that sovereign debt problems are as often caused by financing stops or trade imbalances in the private sector, as they are by fiscal irresponsibility in the public sector per se. Consider Spain or Ireland, or the regions within Spain.

On private imbalances, there are two points to make: a) it would be illegal under the proposed Banking Union/European Systemic Risk Board legislation not to participate in a private sector bail out, proportional to activity levels, if it damages financial services in another jurisdiction (a violation of the single market);⁷ and b) it will be in the interest of any participant to help bail out or restructure an institution operating but not domiciled in its jurisdiction, since not to do so would precipitate the collapse of at least one institution (and possibly others) in its jurisdiction.

This argument makes the case for a jointly run resolution vehicle for private sector problems; that is, one which is mutually owned and independently operated

⁷ The local incorporation of subsidiaries is needed to make this work; also for conduct regulation, Vickers, Basel III.

but which does not involve the mutualisation of debt since the decision to bail out will depend on factors that are likely to differ in different jurisdictions and vary on a case-by-case basis. But since domestic institutions are usually the largest purchasers of domestic sovereign debt, such a bailout facility may become an indirect way of bailing out an illiquid or insolvent sovereign. It therefore becomes vital, again, to have institutions that separate private risk from public risk: that is, separate fiscal irresponsibility from excess private sector debts, recognising that the causality may flow either way.

In addition, the mutualisation of debt needs to be avoided in order to preserve market discipline on the individual issuers of debt⁸; that is, in order to limit any moral hazard effects operating on the financially weaker issuers of debt who would otherwise have an incentive to issue too much debt at lower cost. Nevertheless, there are several reasons for wanting "euro-bonds": lower borrowing costs in distressed economies, better quality debt, stronger collateral for banks (or countries) seeking finance to lend for new investment or to back their short-term financing needs on the repo market (O'Rourke and Taylor 2013). These are important functions, but better supplied through a dedicated Euro level authority in order to avoid moral hazard and perverse incentives appearing at the national level.

The separation principle in a Banking Union: The upshot here is that we need a regime that separates private sector risk from sovereign risk, but which provides a lender of last resort mechanism to underpin stability in the private markets while imposing fiscal constraints to rule out the chances of a sovereign default. The former property requires a rigorous system of financial regulation (as proposed in the UK); but the latter, a system of debt limits with effective sanctions (a debt protocol operated and monitored by an independent fiscal policy authority), similar to that proposed for the Eurozone in 2011 but rendered inoperative by the failure to create a coherent banking union or resolution mechanism.

⁸ It is clear from data on spreads that market discipline was focused on the Euro-area as a whole, not on national borrowing, until 2010 when the markets realized that country bail-outs might either not be forthcoming or not be large enough: see Alessandrini et al (2013)

Then, having separated the two components, problems in the financial sector can be treated independently, and on merit, with targeted lending of last resort by the financial regulator, where justified, through the resolution process above. By contrast, unsustainable fiscal policies will be monitored independently, and eventually ruled out in favour of technocratic solutions recommended by the regional Fiscal Policy Council, in effect suspending the policy process until sustainability can be restored. Thus fiscal councils need to play a crucial observer role in the financial regulation and resolution process too. Given this framework, markets and policymakers can then, in normal times, pursue their own interests without constraint – unless their decisions would lead, predictably, to insolvency.

3. FISCAL ARRANGEMENTS IN A CURRENCY UNION

Simple funding mechanisms, such as a block grant or straightforward tax assignments, cannot give a regional government the capacity to improve the economy on a systematic basis. Instead they are simply a means to secure a certain stream of funding. The mechanisms more broadly are: block grant funding; tax assignment schemes or apportioned taxes; partial fiscal autonomy; fiscal federalism; full fiscal responsibility/autonomy or outright independence.

3.1 Funding the National or Regional Economies

Partial Fiscal Autonomy: Block grant systems have been widely criticised, not least by the UK government⁹. On the other hand, funding schemes with limited autonomy are often unworkable because they require information on future tax revenues that no policymaker can possibly have when they make spending allocations. And if borrowing for current spending is prohibited, they contain no mechanism to reconcile contractual spending (most of the budget) with variable revenue flows until reconciliation several years after the event. Proposals of this kind therefore retain the very problem which all governments wish to avoid: revenue volatility. Moreover, any attempt to fix this problem by using official forecasts of future tax revenues, allowing borrowing, and reconciling the forecasts

⁹ House of Lords (2009); McLean et al (2008)

with actual receipts later, introduces three further difficulties: new grounds for quarrels between the centre and the regions, a long term deflation bias, and a net loss of devolution.

There is a fourth problem, generic to any kind of partial devolution. Revenues that depend on a shared tax base will vary up and down with decisions taken by another tax authority, over which the regional government has no responsibility or control. The only way out of this difficulty is to devolve the entire tax code for a particular tax, not a part of it. That means devolving all the tax rates, tax bands and tax base for each tax power devolved; in other words, independence for each devolved tax. If this is not done, the regional government will have to raise or lower its own tax rates to compensate for changes made at the centre each time a change is made there. But that would take us straight back to a system where the effective revenue flow is determined by decisions made centrally, and devolution is lost. Put differently, a small amount of autonomy will automatically generate new pressures for greater autonomy.

Efficiency and Political Accountability: Generally, we can argue that more devolution is better than less for two further reasons. First because wider devolution is better as a matter of system design (internal diversification to stabilise revenues; insurance against the effects of unrelated policy changes); second because it implies responsibility for creating a better domestic economic performance, as well as accountability in a strict legal sense. Since both are desirable, more is better than less.

Fiscal Federalism: There is an extensive literature on the economics of fiscal decentralisation, or "fiscal federalism", starting with the work of Musgrave in the 1950s and Oates in the 1970s. The conclusion of that literature is that decentralisation, hence fiscal responsibility, typically leads to better economic performance – both in theory and in practice. The argument is usually put in terms of economic efficiency: decentralisation provides an efficient way to correct various forms of market failure, ensure an equitable distribution of resources, and stabilise regional economies and employment. To deny that, one must show that a single, centralised, monolithic government could or indeed would succeed in maximising social welfare across all regions out of a sense of benevolence, despite the electoral pressures and special interests in a multi-region democracy.

In practice, where there are regional differences in structure or resources, or in the way economies respond to shocks or policy changes, or in a region's position in the cycle, it would be very hard – if not impossible – for any one government to come up with one set of policies that satisfied everyone in the sense of maximising wellbeing. Different regions will require different solutions to suit their particular circumstances. It would also be doubly difficult if:

- the central government has less precise information on local needs/conditions; or
- if its policies are helpful in one place, but have adverse spillovers on another; or
- if central government is less accountable because of political distance from the regions;
- or is subject to special interest groups because of the electoral calculus of majority rule.

As a result the provision of public goods, and stabilisation of employment would be inefficient, and the performance of the regional and aggregate economies would fall below potential.

This line of argument is sufficient to demonstrate the classic "decentralisation theorem" of Oates (1972): in multilevel governments, each level of government (including central government) will maximise social and economic welfare within its own jurisdiction. That would necessarily provide a higher level of economic and social welfare than can be gained in a regime in which central government provides a uniform set of policies and public goods for all – since, having additional choices at their disposal, regional policymakers can always choose to replicate the central government's common policies if they wish to do so. Hence, decentralisation will **always** produce better and more efficient outcomes for all, including for the central government – subject to not devolving by so much as to create diseconomies of scale or excessive spillovers in the delivery of public services – if the policymakers wish to take that opportunity.

The standard response to this argument has been that the same result can be achieved by a common set of policies plus a set of lump sum transfers (subsidies, grants, side payments) to each region, chosen to allow the same local outcomes. This may be true: but it just reproduces a grant type system. It also means that grants may have to be more generous in some regions than others; it imposes no accountability on those who raise the grants, *or* on those who spend them. Moreover, if those grants are to respond to local conditions, and if there are structural or cyclical differences between regions, or more accurate information at the local level, or if central government finds itself fiscally constrained, then we will have to ask regional governments to decide on those grants themselves – giving rise to even less accountability and more perverse incentives.

It would therefore be better to ask regional governments to raise and spend their own revenues. At least they are then accountable to their own electorate and must bear the pain of their spending decisions; but they can still profit from more precise information on local conditions, differences, preferences, with some protection from blocking coalitions elsewhere in a centrally determined system. The result would be more effective policies: higher growth and higher employment than is possible under a grant or assigned taxes.

3.2 Allocating Responsibilities

The argument so far makes the case for fiscal autonomy in a federal system. The question now is to decide how far this autonomy should go. Regional governments will recognise that they have limited abilities to influence local employment or prices, or play an active stabilisation role, or to borrow. Central governments therefore retain a defining role to ensure coordination, monetary stability, stabilisation; and in competition policy and providing financial regulation and financial stability (albeit subject to representation from the regions).

Allocating Policy Instruments and Responsibilities: Our arguments so far suggest a natural way to allocate policy instruments between central and regional governments. The power to tax immobile factors, property, natural resources should be allocated to regional governments. They should also be able to set user fees, benefit taxes, and spending; i.e., have the power to raise income, sales,

corporate or business taxes, and the social security taxes that affect mobile factors, production costs and competitiveness; and also control spending on health, education, police and justice, infrastructure, R&D, innovation, and development. The latter are all instruments that affect productivity growth in the short and long run; and unit labour costs – and hence employment and the cost of doing business. Unusually, perhaps, taxes on mobile factors are included here because the ability to set taxes equal to the marginal cost of providing services at the regional level is necessary if households and firms are to choose locations that provide the most efficient level of services – and to give governments a direct incentive to supply those services efficiently. But more importantly, they are the policy levers that allow a regional government to promote growth, employment and a better economic performance in their region.

In general, this will not be competitive ("beggar-thy-neighbour") with neighbouring regions since a better performance in one place will spillover positively to help the regions next door, just as it does between neighbouring countries. It is not a zero-sum game therefore.

By contrast, the "framework policies" that affect monetary conditions, price stability, financial stability, taxes/spending for revenue insurance/risk sharing, competition and regulation policy, mechanisms for internal/external coordination, and commercial policy (tariffs, trade barriers, exchange rates) are better left with the central government. This allocation of policy instruments has been made according to their comparative advantage for achieving the objectives of regional and central governments respectively.

Size of government: This type of allocation scheme emphasises the importance of creating own sources of finance in a devolved system. A regime that relies on grants or tax assignments, by contrast, provides a fatal incentive to expand public spending programmes beyond their efficient level by pressing the centre to shift more in their direction, or by asking the centre to expand the common debt issue in order to allow that to happen. The prospect of an easy bailout, or easy guarantees for local debt issues, would have the same effect. Creating own financial sources overcomes that problem by passing responsibility and accountability over to the regions.

There may be a concern that these arrangements could lead to an expansion of government, with overlapping or conflicting functions at different levels. This will be minimised if policies and responsibilities are chosen according to comparative advantage. In that way, the distortions and inefficiencies that might otherwise arise from excess fiscal competition will be kept below the inefficiencies which appear with central financing. In practice, it appears that this tendency for larger government is weak and depends on the form that devolution takes, not its existence. The key point is, where decentralisation is built around raising taxes (as in tax devolution), it is typically associated with smaller government.

But where it is financed by transfers or grants, as in spending devolution, there is a tendency to larger and less efficient government. Devolving tax powers is likely to lead to smaller and leaner government therefore.

Devolving Fiscal Responsibilities in Practice: It is now possible to set out a fiscal framework that contains tax autonomy or devolution max, but which retains institutional links to central government to maintain coordination, to allow risk sharing and to align regional fiscal policies with the framework policies of the federal government. By maximising own source financing, regional governments can increase accountability *and* realise the efficiency gains. Institutional measures to support the management of risk, risk sharing, monitoring and fiscal oversight are then needed to bring credibility and stability to the system.

To see how this could work in practice, we start from an example of the Basque-lands and Navarra which operate rather successfully in Spain. These areas pay the Spanish government about 9% of their revenues as "rent" for common services: defence, security, foreign/diplomatic service, central administration, contributions to Spain's EU dues and debt servicing. In 2009-08, a comparable sum for Scotland would mean a contribution of £6bn to the UK government. To this we might add another 1% of GDP in solidarity funds to allow the UK government to make its own redistribution and stabilisation payments. These funds mirror the UK's own payments to the EU budget for solidarity purposes.

¹⁰ Oates 1985, 1989, Rodden 2003.

Power over the remaining taxes and expenditures could then be allocated to the regional government: that is those noted above, but also include an assigned share of VAT (control over the VAT rate or its coverage may not be devolved by EU rules); plus other sales taxes; capital gains and inheritance taxes; fuel tax; social security, payroll taxes/nonwage costs (giving national governments control over competitiveness); "cap and trade" (including auctions under the EU-ETS); environmental taxes; financial market levies; council tax; tax concessions; operating surpluses of statutory bodies; and the smaller taxes (stamp duty; alcohol, tobacco and vehicle excise duties; passenger duties). New revenues might include landing fees for natural resources on the Australian model, licence fees for electricity generation, taxes on caffeinated alcohol, green taxes or licensing, a land tax, repatriating interest payments on a share of debt in favour of interest payments on each region's direct contributions to debt.

As a practical matter, and to start the process off, since we would be moving into a world of variable revenues for the first time, priority should be given to allowing the power to borrow; then to devolving power over taxes that affect the rate of return on labour – specifically national insurance contributions and payroll taxes paid by employers, also business taxes and corporation tax. Since the administration of some of these taxes may be complicated (how do you realistically determine how much of an internally integrated corporation's profit actually arises in each of its differently located plants?), there are various simplified ways to devolve these taxes – such as giving R&D credits in a unified system; apportioning the tax liabilities in proportion to employment by plant and location; or allowing corporation tax rate reductions in proportion to, and only when, the regional GDP falls below the national average.

It is further proposed to take pensions out of the social security system. This would require social security contributions to be made into a separate tax – as it is in many EU countries now – instead of the current system which is to fund social security from general taxation and national insurance contributions. Pensions can then be paid out of a common federal insurance fund.

Finally we stress the most important feature of fiscal autonomy is that it transfers to the regional government the means to control the tax base and exemptions, as well as tax rates and tax bands, as a way to expand the revenues

and scope of the devolved taxes. This is founded on the simple observation that the elasticity of tax receipts is always larger to plausible variations in the aggregate level of taxable income, than it is to *plausible* variations in the average tax rate. For example, in a linear system, the actual elasticities are equal (they are both unity); but a 4% annual rise in nominal taxable incomes would require annual increases of 1% point in *average* tax rates to match the contributions to tax revenues being made by the expansions of the tax base (when the average tax rate is 25%). Tax increases on that scale are neither plausible, nor likely to be politically acceptable. In a progressive tax system, the advantage is not so marked: taking a quadratic approximation, the elasticities are 1+2t for changing tax rates and 1+t for changes in the tax base. That could cause us to modify our strategy at high tax rates (large values of t). But the general point is that, in a progressive system, it will be more important to gain control of the base and tax bands, than it is to get control of tax rates.

Note also that automatic transfers (that is, additional risk sharing elements) are built in to this arrangement to provide an automatically stabilising force for the economy via the central budget. This will help reduce the regional government's need to borrow for spending purposes.

3.4 Institutional Support

Some new institutional arrangements are needed if the region is to realise the gains of fiscal autonomy. Devolution reduces the inefficiencies that stem from a centralised one-size-fits-all set of policies, and so improves economic performance. But it may create conflicts in the form of free riding; or spillovers that damage performance elsewhere if not restrained by regional governments or by the central government. Consequently devolution is at its most effective, and the gains from fiscal autonomy largest, when there is diversity of structure, circumstances, preferences, and when the spillover effects of local action are small. Since central government has a comparative advantage in imposing coordination, discipline, and setting the general thrust of policy, the best way to realise those gains is to create a decentralised scheme in which there are small grants to, or rents from, the regions to the centre; with institutions interposed to secure both coordination and the gains of accountability.

We suggest an *Economic Policy Forum*, drawn from the network of fiscal policy councils, to reassure the federal government that each region is operating within a macroeconomic frame-work which is consistent with the rest of the union. It could distribute any payments, loans, or grants to/from the centre for solidarity or stability, and set bail-out insurance contributions. It would also contain representatives from the federal government and each devolved government, to reach agreed decisions on matters of joint interest and resolve conflicts. The Forum would have authority to recommend changes to the policies of any of the constituent regions. Such recommendations would be advisory by majority, binding with unanimity, and would discuss potential retaliations in cases of severe disagreement.

3.5 Fiscal discipline and debt control

Decentralising fiscal policy may lead to fears of weaker budgetary control. Although there is no reason why regional governments should be worse in this regard than central government, there is always a temptation to over-expand and export the burden of financing, tax raising, and paying-off debt to others. Borrowers may calculate (perhaps correctly) that central government would then prefer to bail them out rather than risk the financial disruption that would follow should they default. Thus a real or perceived guarantee of a bail out creates moral hazard among both borrowers and lenders, increasing the risk of default.

There are four mechanisms which can be used to contain such behaviour:

- Increasing the accountability of the regional governments through greater autonomy;
- The risk sharing transfers found in fiscal autonomy. This will depend on the existence of a central budget and automatic transfers to/from that budget;
- Enforceable limits on the size deficit or debt; and
- An independent fiscal policy council charged with monitoring of the government's plans.

The need for greater accountability implies fiscal responsibility is the appropriate regime. It also depends on the policymakers' concern for reputation. A funding collapse would suggest that the regional government had failed and leave them accountable to the censure of the voting public – the more so the more autonomy has been granted. Discipline therefore calls for more autonomy rather than less, backed by some visible restraint/punishment mechanism.

Risk sharing however depends on the existence of a central budget and automatic transfers to/from that budget. Risk sharing also flows from the cross-border ownership of stocks, bonds or other income sources; and from cross-border lending and credit. So there will always be some risk sharing where there are integrated markets for capital, investment and short term financing. However the presence of central government raises a new problem: moral hazard, the perception that excessive deficits will be bailed out or otherwise "insured" by loans supplied by the central government. Moral hazard blunts the incentive to maintain fiscal discipline; to shrink deficits in good times or to prepare for bad times. For that reason, it is better to have regional stabilisation, rather than central insurance and soft budget constraints. In other words, it is better to have more extensive devolution rather than less, or centrally determined lending for that matter.

The third mechanism is to impose enforceable limits on the size of fiscal deficits and debt. In the Euro-zone, the problem with such limits has been two-fold. First they have proved difficult to enforce. Second, our ability to monitor deficits in real time to detect significant deteriorations is limited. Early releases of deficit figures, and the data necessary to strip them of their cyclical components, are so imprecise that the ability to detect violations reliably is only achieved after four years; too late to take any corrective action or to induce such actions through the threat of fines. It is better to focus on limits to debt.

A debt target is useful for many other reasons. First, debt is what has to be financed, and what causes default risk. Second, the debt burden is more clearly defined: what has and needs to be borrowed is known to the markets since they hold the paper. Third, debt is a moving total of past deficits and hence represents the structural position we wish to monitor. Fourth, debt is a stock and not a flow. That means it is persistent, which will make policymakers forward looking in their plans and, by extension, make their plans more credible – or at least more easily

tested for credibility. Moreover, persistence gives them an incentive to restrict debt in order to preserve freedom from financing constraints in the future.

However, an effective monitoring agency is still needed to overcome two defects in the existing monitoring schemes; first that they are partial, and second they are purely backward looking. They do not imply any pressure to modify fiscal plans in the light of future problems. To get round that, we propose an independent Fiscal Council in each region. These councils would be responsible for reviewing the fiscal outlook, the revenues likely to be available, the current *structural* position and likely consequences of current spending policies for sustainable public finances, including the effects of changing demography on pension and health costs.

To ensure that effective debt limits will be enforced, we propose the following mechanism:

- The federal and regional governments jointly operate a central budget as above;
- The debt targeting system should be set up as a debt target value and an upper boundary;
- The space between the target and upper boundary should be divided into three ranges.

If the debt target was set at 45% of GDP, and the ceiling at 60%¹¹, the excessive debt protocol ranges would be from 45% to 50%; from 50% to 55%; and from 55% to 60%. The first range would be the range of normal fluctuation. If the debt ratio entered the second range, the regional fiscal authority would be placed on the watch list and subject to comment and advice from the Fiscal Council. Any support or advice from the Fiscal Council would become conditional on improvements being made. If the level of debt entered the third debt range, this would trigger public warnings and mandatory policy changes. Finally, if the debt

27

¹¹ The EU Council of Ministers adopted the idea of formal debt limits in its declaration of 26 June 2012, but gave little idea of how those limits should be set or how a debt target value could be set to give a "safe zone" in which shocks can be absorbed.

ratio rose above 60%, all guarantees would be lifted. The regional government's fiscal budget would be placed in "chapter 11" administration, with the regional Fiscal Policy Council running government spending and taxation until the 55% limit was regained.

3.6 Advantages of full fiscal autonomy/independence

The proposals here are predicated on the value, to central government, of a consistent economic framework across regions; of saving money by abandoning block grant funding formulae and reallocating spending decisions; of being able to create better economic results in the regions via devolved taxation. This is a constitutional arrangement with gains for both sides.

The Impact of Fiscal Autonomy on Growth and Productivity: How do gains in efficiency and economic management from decentralised fiscal policy translate into better outcomes? The answer is via higher productivity. This is most easily seen through the distinction between a systematically higher growth rate and higher levels of income per head.

First we need to clarify that there is no robust evidence that greater fiscal devolution is associated with higher *rates* of GDP growth; and second to affirm that, to the extent that fiscal devolution produces higher levels of GDP per head, it does so through the devolution of tax and revenue raising powers – *not* through the devolution of spending powers.

On the first point: it is true that there is no evidence of permanently higher long term growth rates, but fiscal devolution does increase the level of GDP per head. Permanent growth rate changes, by contrast, must depend on other factors and cannot be the result of an increase in the degree of fiscal devolution alone. Other factors, an increase in the growth of innovation and technical progress, or in the labour force, need to be involved. This distinction is made clear by:

"There are two reasons to be cautious with these results. First, although they are quoted as leading to higher growth rates, growth models in economics usually show that the result of a one-off increase of some growth creating factor is an increase in the level of output, not a permanent increase in

growth rates. For a permanent increase in the growth rate, **continuing** increases in that factor would be needed every year. But the degree of fiscal decentralisation cannot go on increasing without limit; and even if the consequences of an increase in devolution took some time to be realised, they would eventually come to an end."¹²

Why should these performance improvements be expected? On the second point, a survey of the available academic research is given in a paper by Feld and Schnellenbach (2010). This survey provides an argument from first principles, based on work by Brueckner (2006), that greater fiscal autonomy will be unambiguously associated with higher output levels and possibly higher growth rates if taxes move to support the chosen levels of public spending; that is, if tax devolution is included along with spending devolution. This result continues to hold, and robustly so, if tax competition is allowed between regions. But it does not follow if the tax regime involves a shared tax base, as is proposed in the Scotland Act. There are also arguments that fiscal autonomy will deliver better economic performance when ignorance of regional conditions, pork barrel spending or central coercive power are serious problems.

These arguments therefore imply that greater fiscal autonomy might be expected to deliver a better economic performance in terms of GDP per head. Nevertheless, there is no guarantee of that if policymakers turn out to be incompetent or the economic institutions weak; or if shared tax bases are involved. But that is true in any economic system. And it is especially true in partial autonomy schemes since they, unlike full fiscal autonomy or genuine fiscal decentralisation, depend on a shared tax base. This again makes a clear case for why it is better to go for extended devolution (target independence) rather than a partial scheme.

Spending Devolution vs. Revenue Devolution: The second issue is what kind of fiscal instruments should be devolved? There is no evidence that, if fiscal autonomy raises GDP per head, it does so through the devolution of spending powers. If anything, the opposite is true. The evidence on that point is emphatic:

¹² Hughes Hallett and Scott (2010), p38.

expenditure devolution depresses GDP levels, while devolving revenue powers increases them. To quote Feld (2011):

"Revenue decentralisation has the expected positive effect on productivity, and is consistently highly significant. Expenditure decentralisation, however, has a robust and highly significant **negative** effect on productivity"

It should also obvious that adding revenues to the devolved expenditure instruments will, other things equal, lead to a better economic performance because doing so adds to the number of choices the government can make (for example, by choosing the size of the budget as well as what that budget is spent upon). It would therefore be best to devolve both spending and tax raising powers. But if it is required to choose between the two, then, in the light of the evidence above, it will be better to devolve tax raising powers before spending powers.

4. The SIZE AND BREAK-UP of UNIONS: Scotland and the UK

The analysis so far puts little emphasis on whether greater debt control, fiscal consolidation and greater regulation would be possible or acceptable in practice: that is, on the political economy of sustainable economic policies widely interpreted. We close that gap by using a strand of research developed by Alberto Alesina to reintroduce political economy into the story: namely, his work on the size, number and break up of nations.

The link to the fiscal rules literature above may appear tenuous. But the difficulty that the European Union has had in forging a fiscal union, suggests that it is far from a separate issue. As the sections above imply, divergence and disagreements are driven mainly by conflicts between increasing returns in the provision of public goods (including the use of common policies) vs. the costs caused by structural differences, income differences, and cultural or preference differences given the political opportunity to articulate them:

a) Not everyone will agree on the correct balance of policies with respect to national objectives for inflation vs. output growth or employment – not to mention

the priority for financial stability. Even if we can agree on the goals, there are likely to be disagreements on the relative importance of those goals and on how the economy should be run (degree of regulation, size of government).

- b) Not everybody agrees, or can agree, on the size of debt to aim for or whether a debt target at the national, sub-national, or union level should be allowed. This is as true in the Euro zone as it is outside (in the US for example).
- c) Preferences for spending on social support (vs. defence, infrastructure, culture), education, health, elderly care and other entitlements vary widely. The values thought appropriate for the size of the fiscal sector, d^* , will vary accordingly.
- d) Not everyone agrees on the best target for income distribution, or whether income distribution should even be a target of policy. This means they will not be able to agree on the best means of increasing or decreasing the primary surplus *pb* (that is, using taxes vs. spending instruments).
- e) Not everyone will agree on the speed of consolidation and hence on the size of *pb* increases per period. This is largely a matter of the time profile and dynamics, and of the appropriate horizon, not so much the size of different tax and spending multipliers.
- f) The ability to lower interest rates, and with them risk premia, varies with the reputation and debt structure of the policy authorities, and with their capacity to create growth.
- g) Similarly, the tolerance and opportunity to create competitiveness via a devaluation of relative wages, prices or non-wage costs varies across different economies. The same applies to the scope for productivity gains, which vary with economic structures and the availability of policy levers.
- h) Finally, there is the issue of what to do if the scale of the adjustments needed (in real exchange rates, competitiveness or primary surpluses) are just too large or would take too long.

Two formal results: The central results of Alesina's work on the optimal size and number of nations revolve around his decentralisation theorem: *it is* economically more efficient for local governments to provide Pareto-optimal levels of output than for a central government to attempt to provide a uniform level.

This implies decentralisation gains will increase with the variability in the demand for public goods.

Second, decentralisation reduces the costs of mobility and information costs, but raises the administrative, coordination, and lack of economies of scale costs. Decentralisation creates its benefits through horizontal competition (Tiebout competition between states at the same level in a policy hierarchy) and vertical competition (Breton competition between states and the centre).

These observations lead to a second theorem. If the central government chooses the degree of centralisation, then people or states will choose the amount and type of public goods available. Result: Centralisation then falls with increasing taste differences; with increasing democracy; with the level of income; and with country size.

Do these results have a counterpart in the real world? One example: Scotland is more social democratic leaning (compared to England with its natural Conservative majority). This is a taste difference. Second, local democracy increased with the creation of the Scottish Parliament and devolution in 1999. Third, the economy has recovered, relative to UK, since the 1970s and now marginally outperforms the rest of the UK in a restrictive "one-size-fits-all" economic frame-work. Hence income levels have increased against the traditional benchmark; and would offer good prospects of further and faster increases if Scotland had access to her own policy levers to tailor policies to her own needs. Finally the UK is not small, and has a distinct "celtic fringe" which has been growing in cultural importance. Result: a separatist movement has now taken control, and is leading the country to an independence referendum in 2014.

General Evidence: Is there evidence for these size and break-up propositions on a wider scale? Empirical studies (Panizza 2004; Desmet et al, 2011) show that democracy and fractionalisation of the body politic are the main

drivers for the creation or break-up of nations – more than other factors. However, the forces of decentralisation or centralisation are not static. Jefferson's often quoted speech on independence makes the point. Predictably there have been adjustments from decentralisation to greater autonomy over time by the provinces in Belgium, France, Italy, Spain, UK. Perhaps the classic case is Quebec in Canada, which has gone from conventional province to the brink of independence and then back to a distinct form of asymmetric autonomy.

The reason for this must be the secessionist calculation: are the *net* benefits under secession greater than the utility under union? This is not always the case; several of the separatist movements quoted above have receded. This issue has yet to be decided in Scotland, however. But if secession benefits are not large enough, then fiscal autonomy ("devolution max") is the obvious alternative; the one most often adopted by the participants in secessionist debates when outright independence is not, or is no longer, an option.

Two final points with empirical content in this literature: Alesina's no mobility assumption, by which he means mobility decreases the need for decentralisation since people who wish for a different regime can simply go elsewhere. A classic example is the English dissent, trade and emigration to the American colonies in the 1600s. The contrast, to prove the point, is the central control of trade and land which stifled French colonisation in the Americas in the 1700s and the Spanish-American colonies in the 1800s.

A second example is the C-stability property: an entity with sufficient dissent will break-up until the remaining elements have less distance between themselves than distance from those now on the outside. As an illustration, Massachusetts started as a single colony, but religious dissent led to a faction leaving to set up a new colony in Rhode Island. Massachusetts then stabilised. A contemporary example is Yugoslavia where the advent of democracy, together with clear economic and income differences, and historical-cultural differences, led to a break-up into 7 smaller republics – just as Alesina's second theorem earlier in this

section said it would.¹³ Those smaller republics have, with the passage of time, now stabilised.

Specific Implications: Scotland's exit from the UK's political and/or currency union:

- i) Self-determination leads to more countries being formed than may be efficient from a world-wide perspective. This is a natural result. It reflects the difference between non-cooperative and cooperative outcomes in a game where countries internalise the costs they impose on others, but can relieve the costs imposed on them by others through separation. Obviously this depends on the distribution of costs vs. benefits across the union; on whether the costs of union exceed the benefits of coordinated behaviour. Years of slower growth, lower investment (despite lower unit labour costs), social dependency, no capacity to respond to the agglomeration effects of London, and constant subsidies going south, have convinced many Scots that the costs are too high.
- ii) Internal coalitions often trigger separation even when coalition members are not natural allies. This is because countries can then capture gains from those outside to pay for losses in efficiency when they separate. For example, all Scottish political parties want control of corporation tax to redress the cost and location advantages, economies of scale, and unfair/excess competition from the agglomeration of south-east England. Similarly, the success of the independence campaign may rest on the Greens voting with the Nationalists to achieve their goals rather than linking up with established parties at the European level.
- iii) The number of countries increases with international economic integration: globalisation goes with localisation. Example: Scotland's separatism started as the EU becomes a reality; the economic links continue, but now with no trade barriers and a common single currency outside. Another example is the discovery of oil and gas in the Scottish sector of the North Sea. This made

34

¹³ This example is prompted by Desmet et al's (2011) analysis of the forces behind Yugoslavia's break-up.

Scotland a potential player in the world markets in her own right, rather than a constituent economy in the wider UK.

- iv) The number of countries will rise if utility from public spending increases, and if government is relatively efficient and cheap (as it is in Scotland or Scandinavia, compared to the UK or the Euro-zone respectively) as well as rising with preference differences.
- v) Compensation schemes to preserve the union invites time inconsistency in political decision making ("sunk costs sink the transfers"). Examples of this are common. Scotland believes the original union treaty with England, a treaty between equals with exit rights, has not been upheld. Tatarstan found that offers of local policy powers were unilaterally and rapidly withdrawn by the Russian government after the electorate voted no to independence. The same could happen on a "no" vote in Scotland. On the other hand, a sufficiently close "no" result triggered further moves to autonomy in Quebec, Flanders, South Tyrol and parts of Spain. Either way, increased pressure for independence is widely seen as the best guard against time inconsistency by the centre.
- vi) Summary: Unlike the UK in the EU case below, Scotland's differences with the UK are largely a matter of taste, priorities and culture or history: a preference for social democracy, local democracy(federalism), better economic performance, a smaller more cohesive society in short a case of "C-instability" within the UK union, rather than insufficient mobility.

Specific Implications: the drivers of the UK's potential exit from the EU.

The drivers of calls for a British exit from the EU are very different from the Scottish case. They both have some "C-instability" elements, but that is all. That is to say, the internal differences in priorities and aspirations – significant within the UK, but relatively small in Scotland – are a lot smaller than the distance between the UK's sense of her own interests and way of doing things, and those of the EU's average policymaker or economic centre of gravity. There are exceptions of course: the UK has a lot in common with Germany on the single market and financial regulation, with France on defence and security, with the Netherlands and Poland on deregulation and the importance of access to free markets, etc. But

there are many other things on which she doesn't agree: further integration (deepening rather than widening), the single currency, political union, fiscal union, the social chapter, market regulation (especially in the labour market), and so on.

Britain finds it hard to identify with any of those initiatives and, in contrast to Scotland, has very little sense of "European identity" – although none of these issues are actually imposed on her, given the degree of detachment currently afforded her under the existing treaties and opt-outs. So these elements of distance may not make much difference if the UK left the EU (in the sense that things on the ground would not change much); on the other hand, these factors don't offer any real reason to stay either. In other words, perceptions tend to play a larger role than reality.

Hence, in view of the framework above, the drivers for separation are:

- i) The implication of this part of the UK's attitude is that it might generate a lot of heat rather than light, but once people get down to what functions/decisions might or should be repatriated the list becomes quite short as the British and Dutch government exercises to determine the scope for repatriation have discovered. For Britain, the gains from being in the EU are from membership of the single market; the costs are from the single currency initiative, fiscal or political union, financial and market regulation etc which she doesn't participate in anyway.
- ii) "Distance" from Europe may therefore figure a lot in political rhetoric, but is unlikely to play much of a role in actual decisions. A lack of mobility, relative to elsewhere in the EU, is likely to be more important because differences in culture, asymmetric language skills, and different expectations for society or for legal and democratic processes may have limited the effective scope for mobility. Or because of the comparative success of the economy till 2007 lowered the opportunity costs of leaving, relative to the ease of connections to the rest of the world where language, legal, cultural differences, and long-standing commercial or personal relationships offer much smaller barriers. Thus, in terms of the motives for separation above, "decentralisation" from the rest of the world was not needed mobility was enough which implies the pressure to separate ("decentralise") from the EU, where mobility was lower, would inevitably rise.

- iii) The sense of time inconsistency is important. Britain thought she was getting an unfettered single market, but now finds a myriad of extra regulations driven by financial difficulties and a poor Euro-zone economic performance that she hadn't bargained on not least from financial regulation which the UK believes is an infringement of the single market (the financial trans-actions tax, bonus caps, the incomplete banking union etc). To that we can add the moves to fiscal union, the fiscal compact, undisciplined fiscal behaviour that was not controlled, and the failure of the services industries directive and financial services directive.
- iv) As a result: the net gains from EU membership, smaller than expected because of the damage to the single market, now look a lot smaller than the increased costs of union membership.
- iv) Britain, like many other countries, faces increasing fractionalism in her political life. This is usually put down to the emergence of the UK independence party which, like most single theme parties, does not have the appeal to win office itself; but does have the power to undermine the established parties and thereby play the role of kingmaker at least in terms of the policies adopted. The difference in the UK's case is that the established parties are all split on the wisdom of EU membership question (the Conservatives most obviously, but across the voter base of the other parties too). This gives fractionalism in the UK a much greater scope to stoke up pressures for separation than elsewhere in the EU.
- v) There are of course underlying taste differences: for lower taxation, for less social market economy, for freer markets and deregulation, a greater tolerance for financial inequalities.
- vi) Size matters. Being the (arguably) second largest EU economy, Britain gets frustrated that she has trouble getting her ideas across and accepted where it matters. This is hardly surprising given her reluctant approach to further integration and many of the EU's pet projects. But, in compensation, there is less risk in allowing this frustration to show since the UK derives less than 40% of her foreign exchange earnings from the EU; and likewise, EU foreign investment to or from the UK is a significant minority. Other markets beckon.

5. CONCLUSION

Unlike in the popular song, breaking up is in fact not hard to do. Far from being abstract, the conditions for when it becomes a possibility are rather easily satisfied and are generally in evidence where there are separatist movements.

What Europe needs, therefore, is institutions rather than policies: a) to give members the sense of owning an impartial and independent economic framework that they operate and control (at least notionally); b) to create a structure which reflects the interests of those a succession would leave behind as well as those who wish to separate; and c) to create a broader, more flexible and more accommodating set of institutions within which economies with different aspirations, priorities and market structures can perform successfully without creating tensions or costly spillovers, but not find themselves so restricted that they could do better outside.

It is obvious that the last is the most important of these conclusions. Europe (and the UK for that matter) needs to recognise that: if they wish to preserve their unions, they need to make it positively worthwhile for their members to remain members in terms of their members' own goals and priorities. In the game theory terms, this is simply a matter of incentive compatibility. It is significant that, despite the violent protests and political instability in Greece, Cyprus, Spain, it was the Euro-zone's policies and inability to complete the required institutional and financial regulation arrangements which came in for real criticism and demands for change. Those protests always stopped short of leaving the Euro and ECB – institutions widely seen to be independent, impartial, and where necessary accommodating. The proof of the pudding (and this lecture) is indeed in the eating.

REFERENCES:

- Alesina, A. and E. Spolaore (1997) "On the Number and Size of Nations," *Quarterly Journal of Economics*, 112(4), 1027-56.
- Alesina, A. and R. Perotti (1998), "Economic Risk and Political Risk in Fiscal Unions," *Econ-omic Journal*, 108(449), 989-1009.
- Alesina, A. and R. Wacziarg (1998), "Openness, Country Size and the Government," *Journal of Public Economics*, 69(3), 305-322.
- Alesina, A., E. Spolaore and R. Wacziarg (2000), "Economic Integration and Political Dis-integration," *American Economic Review*, 90(5), 1276-96.
- Alesina, A., A. Devleeschauwer, W. Easterly, S. Kurlat and R. Wacziarg(2003) "Fractional-ization," *Journal of Economic Growth*, 8(3),155-94.
- Alesina, A. (2003), "The Size of Countries: Does It Matter?" *Journal of the European Economic Association*, 1(2-3), 301-16.
- Alessandrini, P., M. Fratianni, A Hughes Hallett and A. Presibitero (2013), "External imbalances and fiscal fragility in the euro area" to appear *Open Economies Review* (special issue, 2014)
- Brueckner J K (2006), "Fiscal Federalism and Economic Growth", *Journal of Public Economics*, 90, 2107-2120.
- Calmfors, L., and S. Wren-Lewis (2011), "What Should Fiscal Councils Do?", *Economic Policy*, 26, 649-95.
- Checherita C., A. Hughes Hallett and P. Rother (2013), "Fiscal sustainability using growth-maximising debt targets", European Central Bank WP 1472, to appear *Applied Economics*.
 - Desmet, K., M. Le Breton, I. Ortuno-Ortin, and S. Weber (2011), "The Stability and Break-up of Nations: a quantitative analysis", *Journal of Economic Growth*, 16(2), 183-213.
- Feld, L. (2011), Submission to the Scotland Bill Committee of the Scottish Parliament, 14 January 2011
 www.archive.scottish.parliament.uk/s3/committees/scotBill/documents/49.SB
 ProfessorLarsPFeld.pdf

- Feld, L. and J. Schnellenbach (2010), "Fiscal Federalism and Long-Run Macroeconomic Performance" paper 1009, International Studies Program, Andrew Young School of Policy Studies, Georgia State University.
- House of Lords Report (2009), Select Committee on the Barnett Formula, 1st Report of Session 2008-09, HL Paper 139, The Stationary Office (HMSO), July 2009.
- Hughes Hallett A (2013), "A Fiscal Policy Council for Scotland" Evidence submitted to the Scottish Parliament, Finance Committee enquiry into a Scottish OBR, 14 August.
- Hughes Hallett A, and A. G. Scott (2010), "Scotland: A New Fiscal Settlement", Reform Scotland, Edinburgh (June).
- Hughes Hallett A, R. Kattai and J. Lewis (2012), "How Reliable are Cyclically Adjusted Budget Balances in Real Time?", *Contemporary Economic Policy*, 30, 75-92.
- Jordà, Ò., M. Schularick, and A. M. Taylor (2013), "Sovereigns versus Banks: Crises, Causes and Consequences", CEPR Discussion Paper 9678, CEPR, London.
- McLean I, G Lodge and K Schuecker (2008), "Fair Shares? Barnett and the Politics of Public Expenditure", Institute for Public Policy Research, London.
- O'Rourke, K. and A. Taylor (2013), "Cross of Euros", *Journal of Economic Perspectives*, 27, 167-192.
- Oates W E (1972), "Fiscal Federalism", Harcourt Brace Jovanovich, New York.
- Oates W E (1985), "Searching for Leviathan: An Empirical Study" *American Economic Review*, 75, 748.
- Oates W E (1989), "Searching for Leviathan: A Reply" *American Economic Review*, 79, 578-583.
- Panizza, U. (2004), "What Drives Fiscal Decentralisation?" CESifo DICE Report 1/2004, 21-25.
- Rodden J (2003), "Reviving Leviathan: Fiscal Federalism and the Growth of Government" *International Organisation*, 57, 695-729.

List of 'Bruges European Economic Policy' Briefings

http://www.coleurope.eu/BEEP

BEEP briefing n° 30 (October 2013), <u>Is Independence Possible in an Interdependent World?</u> <u>Scotland vs. the UK's Participation in the European Economy</u>, by Andrew Hughes Hallet

BEEP briefing n° 29 (September 2013), <u>European Integration and Europeanisation: Benefits and Disadvantages for Business</u>, by Joanna Dreger and Aimé Heene.

BEEP briefing n° 28 (May 2013), <u>Is Withdrawal from the European Union a Manageable Option? A Review of Economic and Legal Complexities</u>, by Phedon Nicolaides.

BEEP briefing n° 27 (May 2013), <u>A Contribution to The Study of Global Competition for Talent: the determinants of student mobility and its consequences for the internationalization of the labor market, by Mélanie Voin and Marcel Gérard.</u>

BEEP briefing n° 26 (January 2013)

<u>Financial Engineering Instruments and their Assessment Under EU State Aid Rules</u>, by Phedon Nicolaides.

BEEP briefing n° 25 (December 2012)

The Economics of Single Market Regulation, by Jacques Pelkmans.

BEEP briefing n° 24 (November 2012)

Why Is Sovereign Debt Restructuring a Challenge? The Case of Greece, by Joanna Dreger.

BEEP briefing n° 23 (January 2012)

<u>Coltan from Central Africa, International Trade and Implications for Any Certification</u>, by Raimund Bleischwitz, Monika Dittrich and Chiara Pierdicca

BEEP briefing n° 22 (February 2011)

Single eComms Market? No SuchThing..., by Jacques Pelkmans

BEEP briefing n° 21 (December 2010)

The Financial Crisis and the Future of the Eurozone, by Paul De Grauwe

BEEP briefing n° 20 (July 2009)

<u>Towards a New (European Research) Deal. The case for Enhanced Fiscal Policy Coordination on Research and Innovation</u>, by Loris Di Pietrantonio

BEEP briefing n° 19 (September 2008)

<u>The Policy Framework for the Promotion of Hydrogen and Fuel Cells in Europe, A Critical Assessment,</u> by Raimund Bleischwitz and Nikolas Bader

BEEP briefing n° 18 (September 2007)

How Social is European Integration?, by Jacques Pelkmans.

BEEP briefing n° 17 (September 2007)

The Sustainability Impact of the EU Emissions Trading System on the European Industry, by Raimund Bleischwitz, Katrin Fuhrmann and Elias Huchler.

BEEP briefing n° 16 (March 2007)

Services in European Policies, by Luis Rubalcaba.

BEEP briefing n° 15 (July 2006)

European Industrial Policy, by Jacques Pelkmans.

BEEP briefing n° 14 (March 2006)

<u>Has the European ICT Sector a Chance to be Competitive?</u> by Godefroy Dang Nguyen & Christian Genthon.

BEEP briefing n° 13 (February 2006)

<u>Testing for Subsidiarity</u>, by Jacques Pelkmans.

BEEP briefing n° 12 (November 2005)

<u>La gestion de la transition vers la monnaie unique et l'établissement de la crédibilité de l'euro,</u> by Jean-Claude Trichet.

BEEP briefing n° 11 (September 2005)

<u>Does the European Union Create the Foundations of an Information Society for all?</u>, by Godefroy Dang Nguyen & Marie Jollès.

BEEP briefing n° 10 (January 2005)

A 'Triple-I' Strategy for the Future of Europe, by Raimund Bleischwitz.

BEEP briefing n° 9 (December 2004)

The Turkish Banking Sector, Challenges and Outlook in Transition to EU Membership, by Alfred Steinherr, Ali Tukel & Murat Ucer.

BEEP briefing n° 8 (October 2004)

The Economics of EU Railway Reform, by Jacques Pelkmans & Loris di Pietrantonio.

BEEP briefing n° 7 (June 2004)

<u>Sustainable Development and Collective Learning: Theory and a European Case Study</u>, by Raimund Bleischwitz, Michael Latsch & Kristian Snorre Andersen

BEEP briefing n° 6 (January 2004)

<u>Can Europe Deliver Growth? The Sapir Report and Beyond,</u> by Jacques Pelkmans & Jean-Pierre Casey.

BEEP briefing n° 5 (April 2003)

<u>Efficient Taxation of Multi-National Enterprises in the European Union</u>, by Stefano Micossi, Paola Parascandola & Barbara Triberti.

BEEP briefing n° 4 (April 2003)

<u>EU Enlargement: External Economic Implications</u>, by Jacques Pelkmans & Jean-Pierre Casey.

BEEP briefing n° 3 (March 2003)

<u>Mutual Recognition, Unemployment and the Welfare State,</u> by Fiorella Kostoris Padoa Schioppa.

BEEP briefing n° 2 (December 2002)

Mutual Recognition in Goods and Services: an Economic Perspective, by Jacques Pelkmans.

BEEP briefing n° 1 (October 2002)

Economic Implications of Enlargement, by Jacques Pelkmans.

List of 'Bruges European Economic Research' Papers

http://www.coleurope.eu/BEER

BEER paper n° 27 (September 2013)

<u>The Economics of State Aid for the Rescue and Restructuring of Firms in Difficulty:</u>
<u>Theoretical Considerations, Empirical Analysis and Proposals for Reform, by Miguel Ángel Bolsa Ferruz and Phedon Nicolaides.</u>

BEER paper n° 26 (February 2013)

The Economics of Subsidies for R&D: The Intrinsic Difficulty of Determining Optimum Subsidies and Implications for Reform of EU State Aid Rules on R&D, by Phedon Nicolaides

BEER paper n° 25 (December 2012)

<u>Social Capital and Individual Happiness in Europe</u>, by Andrés Rodríguez-Pose and Viola von Berlepsch

BEER paper n° 24 (June 2012)

Mutual Recognition: economic and regulatory logic in goods and services, by Jacques Pelkmans

BEER paper n° 23 (June 2012)

<u>Bertrand Competition with an Asymmetric No-discrimination Constraint</u>, by Jan Bouckaert, Hans Degryse, and Theon van Dijk

BEER paper n° 22 (November 2011)

<u>Can Policy Make Us Happier? Individual characteristics, socioeconomic factors, and life satisfaction in Central and Eastern Europe,</u> by Andrés Rodríguez-Pose and Kristina Maslauskaite

BEER paper n° 21 (October 2011)

<u>Do Clusters Generate Greater Innovation and Growth? An Analysis of European Regions,</u> by Andrés Rodríguez-Pose and Fabrice Comptour

BEER paper n° 20 (March 2011)

Market Efficiency in the EU ETS - An outlook for the third trading period, by Mirzha de Manuel Aramendía

BEER paper n° 19 (January 2011)

Exports and Firm Productivity. The effect of US steel safeguards, by Victoria Purice

BEER paper n° 18 (October 2010)

<u>Interconnector Investment for a Well-functioning Internal Market. What EU regime of regulatory incentives?</u>, by Lionel Kapff and Jacques Pelkmans

BEER paper n° 17 (July 2010)

<u>Product Market Reform in EU Countries - Are the methodology and evidence sufficiently robust?</u>, by Jacques Pelkmans

BEER paper n° 16 (March 2010)

<u>The Determinants of Investment in Information and Communication Technologies</u> by Paolo Guerrieri, Matteo Luciani and Valentina Meliciani

BEER paper n° 15 (December 2009)

<u>Informational Barriers to Energy Efficiency – Theory and European Policies</u> by Lars-Morten Andersen and Raimund Bleischwitz

BEER paper n° 14 (December 2008)

<u>EU Policies and Cluster Development of Hydrogen Communities</u> by Raimund Bleischwitz, Nikolas Bader, Anne Nygaard Madsen and Per Dannemand Andersen

BEER paper n° 13 (April 2008)

Economic Approaches of the Internal Market, by Jacques Pelkmans.

BEER paper n° 12 (March 2008)

<u>Cartels: the Probability of Getting Caught in the European Union,</u> by Emmanuel Combe, Constance Monnier and Renaud Legal.

BEER paper n° 11 (June 2007)

Regional Business Cycle Synchronization in Europe?, by Lourdes Acedo Montoya and Jakob de Haan.

BEER paper n° 10 (March 2007)

<u>Family Types and the Persistence of Regional Disparities in Europe</u>, by Gilles Duranton, Andrés Rodríguez-Pose and Richard Sandall.

BEER paper n° 9 (February 2007)

Analysing the Contribution of Business Services to European Economic Growth, by Henk Kox and Luis Rubalcaba.

BEER paper n° 8 (November 2006)

The Determinants of Country Risk in Eastern European Countries. Evidence from Sovereign Bond Spreads, by Kiril Strahilov.

BEER paper n° 7 (November 2006)

Regional business cycles and the emergence of sheltered economies in the southern periphery of Europe by Andrés Rodríguez-Pose and Ugo Fratesi.

BEER paper n° 6 (November 2006)

The 2005 Reform of the Stability and Growth Pact: Too Little, Too Late?, by Fiorella Kostoris Padoa Schioppa.

BEER paper n° 5 (October 2006)

R&D, Spillovers, Innovation Systems and the Genesis of Regional Growth in Europe, by Andrés Rodríguez-Pose and Riccardo Crescenzi.

BEER paper n° 4 (July 2006)

<u>Mixed Public-Private Enterprises in Europe: Economic Theory and an Empirical Analysis of Italian Water Utilities</u>, by Alessandro Marra.

BEER paper n° 3 (November 2005)

Regional Wage And Employment Responses To Market Potential In The EU, by Keith Head & Thierry Mayer.

BEER paper n° 2 (May 2005)

<u>Technology diffusion, services and endogenous growth in Europe. Is the Lisbon Strategy still</u> alive?, by Paolo Guerrieri, Bernardo Maggi, Valentina Meliciani & Pier Carlo Padoan.

BEER paper n° 1 (November 2004)

<u>Education, Migration, And Job Satisfaction: The Regional Returns Of Human Capital In The EU</u>, by Andrés Rodríguez-Pose & Montserrat Vilalta-Bufí.