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EU COHESION POLICY IN A PERIOD OF ECONOMIC CRISIS: EVALUATING IMPACTS IN SMALL OPEN ECONOMIES*

This is a review of issues concerning the role and effectiveness of the EU Structural and Cohesion Funds in different countries before and after the EU enlargement since 2004. Based on Ireland's experience this analysis focuses on the impact of the cohesion policy on the small open economies under the conditions of economic crisis and the implementation of the Lisbon Strategy '2000. An integrated micro-macro approach is presented, attempting to elucidate the policy contradictions and the results from the applied programs at a highly aggregated level, making use of macroeconomic models (macro or top-down) and at a disaggregated level (micro or bottom-up). The thesis is defended, that the interaction of both approaches shall enable the impacts on the micro-level to be linked with the impacts on macro-level (GDP and employment).

JEL: F01; O12; P51

Introductory remarks

From the narrow perspective of economists, there have been three major internal EU policy innovations since the mid-1980's.[1] First, *cohesion policy* was completely redesigned and greatly expanded after 1989. Second, *a single market* was created and launched in 1992. Third, a *single currency* was adopted by most member states in 1999. The single market and single currency were systemic changes to EU economic governance whose implementation required detailed preparatory analysis and political will rather than big budgetary allocations. The restructuring of cohesion policy, on the other hand, required massively increased financial resources, and these came mainly from reallocations of funds released by CAP reforms rather than from any greatly expanded EU budgetary envelope. Indeed, the resources available in the EU budget have shrunken in recent years, at least when expressed as a share of EU GDP.

In the cases of the single market and single currency, massive, well-funded research projects preceded their launch and were used to explore all aspects of the proposed policy changes. The results commanded wide acceptance and became instrumental in building consensus around the initiatives (Cecchini, 1988; Emerson et al., 1988; Monti, 1996; European Economy, 1990). However, no such research initiatives were carried out in the case of cohesion policy. On the contrary, cohesion policy tended to muddle along, with the guidelines, rules and regulations being formed and reformed as the various EU budgetary programme periods came and went: 1989-93; 1994-99; 2000-06; currently 2007-13, and we now prepare for 2014-20.

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[1] We regard the progressive EC/EU enlargements of 1982, 1986, 1995, 2004 and 2007 as "external" developments.

Rather than staking out a central role for the European Commission in developing and clarifying all aspects of cohesion policy, the investigation of many deep questions were put out to the market in the form of *ad-hoc*, bought-in consultancy and academic studies. While the big debates on the single market and EMU are over, arguments about the role and effectiveness of cohesion policy still rage, and are powerful influences behind the present budgetary debate.

Although we are only three years into the current EU budgetary programming period which started on January 1st, 2007, public discussion is already under way on the nature of the budget for the next seven year period, which is likely to cover the seven-year period 2014-2020. Since about one third of total EU budgetary resources is currently devoted to implementing cohesion policy, it is understandable that the European Commission and donor states need to be reassured that their money is being spent wisely and used effectively in achieving the stated goal of promoting growth and convergence of standards of living throughout the EU. Moving beyond any altruistic desire to promote cohesion in *beneficiary* states, there has been increasing interest in the spillover benefits to the *net donor* states. Curiously, this issue had never been examined until recently.[2]

In order to reinforce incentives for beneficiary states to spend money wisely, their administrations are required to evaluate the likely impacts of Structural Fund programmes on future economic performance. Evaluation methodology takes one into new and complex areas of economics and has become an active area of applied research. The outputs of such research serve as important inputs into the present budgetary debate. But we shall see that the conclusions are still confused and no clear picture has yet emerged.

Cutting through complexities of the debate on the future role of cohesion policy, three strands attract most attention. The *first* strand emerged from the research activity that deals with the evaluation of the effectiveness of Structural Funds in the past. The *second* strand is associated with advocacy of a shift in the emphasis of EU funding away from narrow equity goals of national and regional cohesion and towards the wider global aims of the Lisbon Strategy. The *third* strand focuses on the kinds of methodologies that are appropriate for the future evaluation of the impacts of cohesion policy.

Of course outcomes in EU policy debates are as much driven by politics and power as they are by scientific research and analysis. Nevertheless, research is influential in forming political opinions. The English economist John Maynard Keynes famously claimed that:

"The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who believe themselves to

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[2] "The Economic Return of Cohesion Expenditure for Member States", Study Number PE 419.106, May 2009, European Parliament, Directorate-General for Internal Policies, Policy Department B, Structural and Cohesion Policies (http://www.europarl.europa.eu/studies).

be quite exempt from any intellectual influences, are usually the slaves of some defunct economist."

We examine these three strands of the debate and arrive at some unsettling conclusions. To anticipate, the message from the cohesion policy evaluation literature might be characterised as being generally hostile, particularly when directed at regional convergence. A small number of widely cited studies arrive at extremely negative conclusions, which are often accepted uncritically by participants in the policy debate and passed on without proper evaluation. If these conclusions were reliable, and if people believed them, then advocates of cohesion policy would have a very weak case for its continuation. However, we show that some of the most influential studies are methodologically unsound, and should not be used uncritically as guides to future cohesion policy reforms.

In relation to the “Lisbonisation” of EU Cohesion Policy, this seems to be succeeding in pulling EU development aid away from a focus on equity, as enshrined in the Treaty, towards efficiency and competitiveness goals which are deemed to be more important in a globalised economy, principally at the national level. We draw out some implications for budgetary priorities and suggest that the future of cohesion policy may be threatened because it has come to be viewed narrowly in terms of the equity objective, when in fact it should be viewed as being at the centre of regional industrial strategy which is a necessary pre-condition for achieving the ambitious goals of the Lisbon Strategy.

In relation to current and future evaluation methodologies, we show that there is a gulf between top-down analysis, based on macroeconomic models, and bottom-up analysis, based on cost-benefit analysis and other microeconomic approaches. The failure to bring these two approaches together has generated much uncertainty in empirical evaluations and may have seriously damaged the cohesion policy agenda.

Has cohesion policy been effective?

When addressing the question of the effectiveness of cohesion policy, one needs to understand that, unlike EMU, cohesion policy is not so much a “policy” but is a complex envelope of policies. It is designed in a partnership between the recipient states and the European Commission (EC); is applied to a heterogeneous group of the “poorer” member states and in some regions of the “richer” member states; it consists of a very complex range of public investment programmes; and it is implemented over periods that can last up to nine years.[3] The instruments of cohesion policy are also complex, and include investment in a range of types of physical infrastructure; provide funding for programmes of vocational education, training and re-training; and make available direct aid to commercial businesses for the purposes of promoting activities such as R&D, marketing, management

[3] Although the current budget programming period lasts seven years (2007-13), under the so-called “n+2” rule, cohesion policy expenditure can continue until the year 2015.

education, entrepreneurship etc. Some aspects of cohesion policy have international as well as national and regional implications, and are directed to improve transport and communication links between member states as well as within member states.

In view of this complexity, the wide geographical coverage of assisted countries and regions, and the extended duration of the policy, the task of ex-ante and ex-post evaluation of policy impacts and effectiveness is very challenging. Central to these challenges is the issue of defining the appropriate counterfactual. In other words, one must establish what might have happened in the absence of Structural Funds, before one can quantify the actual benefits. Probably the best defence of EU cohesion policy would be to be able to demonstrate unambiguously that it has been a success in the past.

One approach to evaluation of benefits has been to make use of large-scale, complex economic models of the recipient economies which can then be used to isolate the role of cohesion policy at the margin, i.e., separate from all other external and domestic policy influences on the economy.[4] However, using the analytic, model-based approach is not without problems since it means that one must engage in serious research concerning appropriate types of models, issues relating to the foundations of the models, and challenges to be faced when one builds the first generation of such models for the economies of many of the new EU member states. The lack of agreement between different modelling approaches can be irritating to hard pressed policy makers who seek robust and pragmatic conclusions concerning the effectiveness of cohesion policy.[5]

Consequently, it probably came as a relief to policy makers and analysts when a technique was proposed that appeared to reduce the task of evaluation of the entire field of EU cohesion policy actions, in all the recipient countries, to the specification of a "simple" single equation, the calibration of this equation with an aggregate panel dataset, and the interpretation of the empirical implications that flow from the analysis when Structural Funds are "switched on" and "switched off". When the results of such an approach were then used as justification for a serious critique of cohesion policy, asserting that its effectiveness is totally conditional on country characteristics that may be in short supply in many poorer member states (e.g., the quality of public institutions), and that cohesion policies should therefore not be implemented in the new member states, the conclusions and policy recommendations are certain to command widespread attention and to become highly influential in any debates concerning the future of cohesion policy.

[4] Two such models are used regularly by the EC: see Roeger and int'Veld, 1997 for QUEST (the internal DG-ECFIN model); Bradley et al., 2005 for HERMIN (used within DG-REGIO and by some member states). A more recent IMF study of cohesion policy uses the GIMF model of Kumhof and Laxton, 2008 (see Alland and Annett, 2008).

[5] Bradley and Untiedt, 2008 provide a survey of the range of complex issues that arise in the "modelling" debate when comparing and contrasting the QUEST model of DG-ECFIN and HERMIN models used by DG-REGIO and others.

The most prominent example of the above type of evaluation study is by a Dutch group, Ederveen et al., 2006 ("Fertile Soil for Structural Funds?"), and its earlier version Ederveen et al., 2002 ("Funds and Games: The Economics of European Cohesion Policy"). A recent search on Google Scholar produced an impressive 51 citations of Ederveen et al., 2006, the same number of citations of Ederveen et al., 2002, and citations are growing rapidly in yet-to-be-published works.[6]

The following is a typical example of how the Ederveen *et al* results are adopted and used in critiques of EU cohesion policy:

"On the basis of the econometric analyses for the 'old' EU-13 (excluding Germany and Luxembourg) for the years 1960-1995 (in five-year periods), (Ederveen et al., 2006) found that EU assistance did not foster the capacity for growth in the less developed Member States. ...While the highly developed countries, with their open economies and high levels of institutional development, gain acceleration impulses from the influx of external funding, in other cases – mainly in the less developed countries – Structural Funds can even decrease the rate of growth. Estimates (…) for the new Member States indicate that the massive inflow of EU funds may lead to the slowing down of their growth due to negative partial elasticities of growth relative to the influx of funds, caused by the level of institutional development, particularly corruption" (Bachtler and Gorzalek, 2007).

A colleague and I recently subjected the two Ederveen et al. studies to a searching examination and reached some very disturbing conclusions about their validity (Bradley and Untiedt, 2008b). First, the data sample used covered the period 1965-1995. But only when the Structural Funds were reformed after 1989 did the amount of EU aid become significant, expressed as a percentage of recipient country GDP.[7] For all countries except the four post-1989 so-called Cohesion states (Greece, Ireland, Portugal and Spain), the highest share of Structural Funds in any single year was only 0.15 per cent of GDP (in the case of Italy). Even in the case of the four Cohesion states, the shares prior to the 1989 reform and expansion of cohesion policy were all below 0.6 per cent of GDP. For the final five-year period analysed in the panel dataset, the highest share was for Portugal (1.5 per cent), the share was about 1 per cent for Greece and Ireland, and was 0.4 per cent for Spain. Compared to the role of two "typical" non-cohesion drivers of growth (i.e., public investment and human capital investment), these were trivially small expenditures for all but the four Cohesion states, and even for these states, trivially small for all but the final panel dataset observations.

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[6] The most commonly cited paper is Boldrin and Canova, 2001, which scores 272 citations in Google Scholar. We return to this paper in our concluding section.

[7] In fact, Ederveen et al only examined the data from the European Regional Development Fund (ERDF) part of the Structural Funds, and ignored the other elements (such as the European Social Fund - ESF).

Of course, it would be unwise to pre-judge policy outcomes on the basis of casual observations concerning data. It is always possible that the pre-reform Structural Funds might have had a statistically significant impact on growth and convergence outcomes. However, the small size of the aid injections prior to 1989, and the higher injections over the extremely short end-of-sample period between 1989 and 1995 that are captured in the Ederveen et al. data sample, might reasonably give one pause in expecting too much from so little. The funding situation changed dramatically after 1989, and Structural Funds are now highly significant when measured as shares of recipient country GDP. However, this post-reform period was largely excluded from the analysis of Ederveen et al.[8]

Second, even assuming that the data were appropriate and the cross-section methodology was valid, the empirical results presented by Ederveen et al. appeared to be so unstable as to provide no robust basis for the credibility of their analysis and policy conclusions. For example, eliminating one country – Greece – from the sample causes the results to collapse. The results are also sensitive to the exclusion of the most recent data from the 1989-93 programme period. We conclude that the use of the analysis to infer dramatic and extremely negative policy conclusions for the new EU member states of the former Communist bloc is almost certainly misleading.

Third, the basic empirical approach used by Ederveen et al. to investigate cohesion policy effectiveness draws its inspiration from research carried out in an earlier debate on the effectiveness of aid given to very poor, under-developed countries (Burnside and Dolar, 2000; Riddell, 2007; Easterly, 2003). Not only is this debate even more fractious than the debates that take place between economic modellers, but unfortunately for its practitioners, the use of this methodology in the area of policy evaluation has been shown to be deeply flawed and to tell us nothing about the effectiveness of public policy (Rodrik, 2004).

Our analysis of the methodology and results of Ederveen et al. drive us to the conclusions that the policy recommendations derived from this work are unsound and without merit. In particular, the dogmatic recommendations that are made concerning the futility of giving Structural Funds to the new EU member states are not supported by the analysis that is presented in the paper. It is unsettling that these papers have become so influential in the debate on the future of EU cohesion policy and that they have dominated all other empirical approaches, including those based on structural macroeconomic models. We will take up this issue when we turn to the third strand of the debate (future macro and micro methodologies) and we will make some suggestions on how the evaluation literature ought to be carried out in a more scientific way.

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[8] The 1989-1993 period was included in the Ederveen et al. data set. But only the so called “implementation” (or Keynesian) impacts fall fully within the period of the data set. No longer-tailed supply side impacts from the 1989-93 programming period would have had time to manifest themselves.

Cohesion or Lisbon?

One should always be sceptical of policy initiatives that are accompanied by inspirational mission statements that have the effect of constraining critical thinking.[9] In the case of the Lisbon Strategy, the mission is:

"To make the EU the most competitive economy in the world and to achieve full employment by 2010"

This strategy, launched initially in 2000 and developed at subsequent meetings of the European Council, rests on three pillars:

i. An *economic* pillar preparing the ground for the transition to a competitive, dynamic, knowledge-based economy. Emphasis is placed on the need to adapt constantly to changes in the information society and to boost research and development.

ii. A *social* pillar designed to modernise the European social model by investing in human resources and combating social exclusion. The Member States are expected to invest in education and training, and to conduct an active policy for employment, making it easier to move to a knowledge economy.

iii. An *environmental* pillar, which was added at the Göteborg European Council meeting in June 2001, draws attention to the fact that economic growth must be decoupled from the use of natural resources.

My concern about the Lisbon Strategy, and the "Lisbonisation" of cohesion policy is that the strategy may be more appropriate for large, advanced states and may not be the most useful or relevant way for small countries and regions to think about their development planning. I have been surprised by the amount of time and effort given to "Lisbon" dialogues, in contrast to the sometimes perfunctory way that many country and regional development plans are prepared to absorb Structural Funds, an exercise that is often detached from all wider issues in the national development strategy. The weightless "knowledge" economy seems always to be more exciting, and to offer more potential, than the messy "real" economy!

The Irish experience is probably typical of small EU states that need to address the challenge of cohesion, and may be very relevant in the case of Bulgaria.[10] Irish policy makers, when they initially developed their *national* policies, were probably closer in their thinking to present-day German, Spanish and Polish *regional* policy makers than they were to (say) British, German or French national government policy makers. A strategy of focus and specialisation in a very limited range of productive activities is more necessary in a small economy than in a large one. No amount of EU

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[9] It is reported that, in response to the publication of the original Lisbon Agenda in 2000, the then Polish Deputy Foreign Minister, Radek Sikorski, reacted as follows: "I hadn't laughed so hard since the Communist Politburo used to announce totally unrealistic production targets. It was the same kind of thing".

[10] We use the term "small" in a strictly economic sense. A "small open economy" is one that has a high exposure to world trade, where economies of scale must be sought through specialisation, and where producer prices in manufacturing tend to be dominated by external prices and exchange rates. Almost all the new EU member states are "small" in this sense.

funding will compensate for the absence of high quality strategic thinking, either at the national or the regional levels. Nor will the mere availability of EU funding automatically produce dynamic growth within EU regional economies.

When one examines how lagging economies develop over time and over space, three characteristic features stand out:

i. Economic activity tends not to be spread uniformly over space or over sectors, but tends to cluster or concentrate;

ii. Such clustering is clear evidence of some kind of increasing returns (i.e., doubling inputs more than doubles outputs) and this should be exploited by policy makers;

iii. Growth centres in specific locations (usually cities of above a certain size) will tend to interact with each other over space to form corridors, or elongated growth centres.

National and regional development is probably most successful where two conditions hold:

i. A sufficient degree of policy autonomy is available that permits freedom of action to address local problems;

ii. Economic and business policies are designed and implemented in tandem: the first to design an attractive environment in which business can flourish; the second to recognize and exploit profitable opportunities where they exist, and to feed back information to policy-makers where problems and obstacles are identified.

The challenge facing national and regional policy makers is to understand how national policies can have both positive and negative impacts at the regional level, while acknowledging the extremely constrained scope for designing off-setting region-specific policies within the context of the nation state. One possible reaction is for regional policy-making to become inward-looking and to focus on inter-regional distributional issues. A much healthier reaction is for regions to become more outward looking and to engage with the more complex, political and fluid rules of the global marketplace as they seek to optimise gains from local policy initiatives. The former (redistribution) tends to be associated with purely domestic regional policy initiatives while the latter (growth) is the focus of EU regional policy.

What an examination of the recent performance in Ireland shows is that the intelligent combination of cohesion policy and business strategy can generate huge synergies in terms of rapid national growth and convergence.[11] To achieve these synergies requires a degree of economic policy autonomy that can be used, for example, to protect workers who lose their jobs in declining sectors and who require extensive retraining for other occupations. But more importantly, policy autonomy needs to be directed at addressing weaknesses shown up by industrial strategy frameworks such as the Porter diamond (Porter, 1990) and the Best capability triad

[11] Here we are not ignoring the recent serious recession in the Irish economy! But this recession has complex explanations, mostly related to internal domestic policy failures. Openness exacerbates the impacts of a global recession. But the depth of the Irish recession has almost nothing to do with any failure of the underlying Irish development model.

(Best, 2001). However, seldom if ever are the two different perspectives (cohesion policy and business strategy) looked at as being entirely complementary and mutually supportive. Ideally, the Lisbon Strategy should act as a bridge between cohesion policy and business strategy, but it tends to fall uneasily between them and risks becoming disconnected from EU Cohesion Policy.

When it comes to business strategy, regions have - or at least usually seek - some freedom of action which they can attempt to use to differentiate their business environment from other regions of the state. States also need to focus on business policy initiatives, but in the wider context of institutional and regulatory arrangements that promote greater efficiency of their firms as they compete within the international marketplace. States can use economic policies to attempt to influence the environment within which businesses can function efficiently, even though their freedom of action has diminished as supranational organizations like the European Union take on more power as a result of policy harmonization. Regions have far less power, and must take most aspects of the economic policy environment as set externally by the state to which they belong.

But regions are not completely powerless when it comes to policy making, and they can use business policies to distort conditions in their favour relative to the other regions of their state. Nevertheless, policy makers in regions still need to understand how national economic policies affect them differentially, even though there is little that they can do to influence policy other than to call for some form of ‘compensation’ to offset actual or perceived disadvantages. Unfortunately, such ‘compensation’ often comes in the form of financial transfers from the core regions to the peripheral regions that can blunt competitiveness and generate dependency. The region of southern Italy called the *Mezzogiorno* has given its name to a kind of semi-permanent underdeveloped dependency.

The dilemma facing regional policy makers requires them to strike a balance between the knowledge that national policies can have regionally asymmetric negative impacts, and the extremely constrained scope for designing off-setting region-specific policies within the context of the nation state. Thus, regional policy has a built-in tendency to become inward looking, and this is sometimes difficult to counteract. National and EU policy-making, on the other hand, tends to be more outward looking and is constrained only by the more complex, political and diffuse rules of the global marketplace as it seeks to optimize local gains from policy initiatives.

These policy dilemmas have been summarized by Kenichi Ohmae, 2000, as follows:

The world economy today represents a simultaneous shift of power from the traditional national government down to region-states, and up to super-national economic blocs. Governments in tune with this change will seek economic stability through the latter, and prosperity by means of the former.

For example, with the regional devolution measures affecting Northern Ireland, Scotland and Wales within the UK, some elements of power have begun to shift from the centre (London) to the regions (Edinburgh, Cardiff, Belfast). Simultaneously, increasing integration tendencies within the European Union are resulting in some powers that were previously the prerogative of nation states passing to supranational agencies such as the European Central Bank and the European Commission. In certain respects, the policy environment of regions is coming to resemble that of small states, while the policy environment of small states is coming to resemble that of regions. Indeed, according to Ohmae, the world economy has become a series of interacting regions, where national boundaries have lost much of their previous economic and business significance (Ohmae, 1996).

I believe that the Irish experience suggests a different perspective on the Lisbon Strategy that may be of particular relevance to new member states like Bulgaria. What the Irish experience shows is that if developing (or lagging) countries wish to work the Lisbon Strategy, what is really essential is to have guiding national development strategies that are appropriate and coherent. Starting in the late 1950s, wide areas of public policy in Ireland were increasingly integrated within encompassing industrial strategies that identified high quality manufacturing (mainly from foreign direct investment) and service sector spin-offs as the main driving force of national modernisation and growth. These strategies evolved organically, and were not always rigidly codified in the way that we have come to expect today! Indeed, we were not always conscious of the degree of policy innovation and integration that was actually going on around us, driven by government and by the state development agencies! For example, when Professor Michael Porter (of the Harvard Business School) published his seminal book *The Competitive Advantage of Nations* in 1990, it generate great excitement in Ireland. Yet the Irish Industrial Development Authority (IDA) had been implementing Porter-like strategies on industrial focus and clusters since the early 1960s!

Micro or macro evaluation: getting the balance right

Decision making in a modern market economy is fraught with many difficulties. Policy-makers have to decide about alternatives in a situation where the future outcome is uncertain and where relevant information about the past and present is often lacking. They face numerous and diverse policy alternatives and complex trade-offs. In addition to using quantitative criteria, they also need to incorporate qualitative criteria into the decision-making process, which is never straightforward. Finally, decision making in the public domain is usually not a one-shot activity, but part of a continuing process. Hence, choice possibilities, relevant criteria and priorities evolve over time and give rise to feedback relationships that need to be taken into account.

In spite of such difficulties, policymakers have to develop and implement policies that are likely to have the best chance of contributing to raising the standard of living. Models are an essential tool in this process. Since they are usually constructed by academic specialists, models have to take account of the need to facilitate communication between the model builders and the model users. The more straightforward the model, the easier it will be to understand its internal logic and the better the chance that the policy maker will use it consistently and appropriately. So, models need to be *simplified* representations of the real world, but not so oversimplified as to be inaccurate or misleading. They must incorporate all relevant aspects of the underlying problem into the model structure. They must be *robust*, producing results that are plausible and reliable. They must be *transparent*, with results that are checkable and the transformation from input to output data must be transparent. They must be *versatile*, flexible enough to allow for the implementation of new data and the individual requirements of users. In addition to being *positive* descriptions of reality, they must also have some *normative* characteristics, and be able partially to include intuitive and subjective judgements. Finally, they need to be set up in *computer form* for high speed data processing, and permit users fast access to input and output data.

In measuring the causal relationships between policy instruments and policy impacts, three important economic criteria for evaluating a policy have evolved:

i. Appropriateness,
ii. Micro and macro effectiveness, and
iii. Efficiency.

Appropriateness can be defined as: "suitable or proper in the circumstances". It is a fairly minimalist criterion. Policies are at least required to be appropriate, in the sense of being broadly suitable for the identified purposes. According welfare economics, those policies are appropriate which attempt to correct market failures and improve the functioning of the economy.

Effectiveness can be defined as: "successful in producing a desired or intended result". Thus, an effective policy always needs to be appropriate, but an appropriate programme may not necessarily be effective. The assessment of effectiveness is based on the extent to which expected effects have been obtained and desired objectives have been achieved. Effectiveness is usually evaluated by relating an output (i.e., an impact indicator) to a quantified objective. It is useful to distinguish two approaches to the analysis of effectiveness. The first uses a micro economic (or bottom up) approach, building on welfare economics. The second uses macroeconomics to assess the overall (or top-down) impacts (and is often called "impact analysis").

Efficiency can be defined as: "achieving maximum outputs with minimum wasted effort or expense". Considerations of efficiency only arise in cases where policy measures are already both appropriate and effective. In analogy with effectiveness, the issue of efficiency has a macro and a micro side. In the case of macro efficiency, one needs to investigate whether the same macro impacts could be obtained by less public spending or whether greater macro impacts could be obtained for the same aggregate level of public expenditure, but with a different allocation of resources as between different policy instruments. Efficiency at the microeconomic level is usually measured by assessing the costs and benefits of different alternatives (via cost-effectiveness, cost-benefit or multi-criteria analysis).

When large-scale public investment programmes (such as EU cohesion policy) are designed and evaluated, different modelling tools are needed to assess the micro and macro policy impacts. These modelling tools typically range from cost-benefit analysis of individual projects at the one extreme to an evaluation of aggregate programme impacts on the entire national economy at the other, the main characteristics of which are set out in Table 1.

Table 1

Trade-off between the micro- and macro-approach

	Micro (bottom-up)	Macro (top-down)
General structure	Informal, flexible, use of subjective elements	Formal, complex, objective based on behavioural theory
Level of disaggregation	High (individual projects)	Low (aggregated)
Use of theory	Weak (judgemental)	Strong (macroeconomics)
Model calibration	Judgemental	Scientific/econometrics
Policy impacts	Implicit/ranking	Explicit/quantified
Treatment of externalities	Usually ignored	Usually explicitly modelled

Taking micro evaluation approaches first, these tend to have both formal and informal elements, and introduce a degree of subjectivity concerning what ought to be included in the analysis, and what can safely be excluded. The focus is usually on individual projects (a bridge, a new link road, a power station, a training scheme, etc.) or making choices within a relatively homogeneous group of projects (this road versus that road). Theory is kept in the background, although welfare economics is the underlying philosophy (Stiglitz, 2000). If formal techniques are used (e.g., Cost-Benefit Analysis (CBA)), they often have a large judgemental element. Policy impacts usually take the form of ranking as between a choice of projects, or attainment of intermediate goals (e.g., to reduce transport costs/times) and do not inform us directly about the ultimate goals of cohesion policy, i.e., convergence of regional and/or national living standards. And only a small range of externalities can be addressed (i.e., project spillovers that cannot be quantified in terms of market impacts).

The macro approach has very different characteristics. It is highly formalised and based on explicit theories of behaviour. Its focus is at the aggregate level, such as the impacts of an entire Operational Programme, or of the aggregate programme of investment. It draws on strong theoretical inputs, mainly from macroeconomics. The models are explicitly calibrated using historical data, using formal econometric techniques.[12] And wider externalities can be handled, such as economy-wide benefits of improved infrastructure, human capital and R&D.

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[12] Macroeconomic models have to address the "Lucas critique", which asserts that model-based policy analysis is invalid since the model's structural parameters (the numbers obtained from statistical analysis of past data) cannot be assumed to remain unchanged in the face of future policy regime shifts. The force of the Lucas critique is greatest in the case of "reduced form" models, i.e.,

However, by combining these two, usually isolated, evaluation approaches, one can avoid the loss of important information in the process of evaluation and thus seek to maximize effectiveness, efficiency and desirable policy impacts. The above mentioned gulf between micro and macro policy analysis arises because it is never possible in practise to derive the aggregate impact of any large-scale public investment programme from simply adding together all the individual micro impacts of its constituent projects. A major reason for this is the presence of complex substitution and externality effects in the overall programme, and their likely absence from micro (or project-specific) analysis. On the other hand, the aggregative top-down approach is designed to explore overall macro effects, but cannot make detailed judgements about the efficiency of individual projects embedded within the overall investment programme. In moving between the micro and macro perspectives, different issues come into play, as summarised in Table 1 above.

The reality of past evaluations of cohesion policy covering the period 1989 to the present is that impact evaluations have tended to be macro, or top-down, in the sense of attempting to answer a question such as: "What was the quantitative impact of the policy on a range of target variables (GDP, employment, productivity)?". Applications of micro techniques have tended to address different, monitoring questions, such as: "Were the funds spent on the designated investment categories according to schedule? Or how many kilometres of motorway were built?"[13] The two approaches have been conducted in parallel with each other, with almost no dialogue between them.

Efforts have been made to link micro and macro impact studies. The first such attempt was in the mid-term evaluation of the Irish cohesion policy programme for the period 1994-1999, where a formalised micro impact evaluation was designed that served to highlight areas of investment that were no longer needed ("sundown" projects) and other areas of emerging need ("sunrise" projects) (Honohan et al, 1997). This micro evaluation fed into the mid-term macro impact evaluation, and increased the credibility of the aggregate, top-down analysis. These techniques were later extended to the mid-term evaluation of the 2000-2006 East German programmes (GEFRA/ESRI, 2004). An attempt to formalise the micro-macro links in the analysis of cohesion policy was made by Bradley and Untiedt, 2006, but further progress is hampered by the lack of research from the micro side.

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small-scale models whose equations represent a mixture of behavioural, policy reaction and *ad hoc* dynamic elements. Models need to be "structural", and policy-induced structural change explicitly modelled.

[13] To the extent that micro studies are carried out, they tend to be ex-ante evaluations at the design stage, and are almost never placed in the public domain. Hence, they cannot be used by external researchers to form judgements of efficiency of design and effectiveness of execution, and nothing much can be concluded about the ex-post micro impacts. In view of the fact that over one third of the EU budgetary resources is devoted to cohesion policy, this is an extraordinary gap in our understanding of the benefits of the policy.

Reshaping the debate: concluding remarks

Let me draw together some implications of what I have been saying. *First*, the research on evaluating the benefits of cohesion policy has thrown up a series of highly negative conclusions in controversial reports that have come to dominate a call for radical changes in future policy. *Second*, the Lisbon Strategy has had a probably unintended side effect of directing attention away from regions and back to national competitiveness in the context of the global economy. This contradicts much of what we know about the processes of regional growth and development. The process of "Lisbonisation" of EU cohesion policy may benefit the more advanced EU states more than the less advanced states unless both cohesion and Lisbon are treated in an integrated framework or strategy of development that takes into account the small size and peripheral nature of the lagging states. *Third*, there is no easy way of designing and evaluating EU cohesion policy. The present approach to impact evaluation is fairly chaotic and needs to be refocused. Recipient countries would be wise to take the opportunity of cohesion funding seriously, deploy all their best academic resources to ensure optimal design and best use of funds, and develop a balance between macro and micro approaches to evaluation. Brussels will not do this for you. The net donor states will not do it for you. You must do it yourself. And failure to do it will almost certainly result in a premature winding down of EU cohesion policy.

So what can be done about the evaluation of cohesion policy? An important study by Boldrin and Canova, 2001, the most commonly cited paper in the area of evaluation of EU Cohesion Policy, concluded that:

"Regional policies serve mostly a redistributional purpose, motivated by the nature of the political equilibria upon which the European Union is built" (p. 206)

If one defines EU Cohesion Policy in terms of seeking equity between regions rather than between countries, past experience as well as common sense tell one that this policy will not only fail, but will probably be counter productive. If EU Cohesion Policy is interpreted as if it had been designed purely with regional equity as a goal, then it has not been a success. Rich, middling and poor regions coexist with each other, in the past, today, and will probably do so in the future.

But although the rhetoric of the EU cohesion objective, as expressed in the Treaties, seeks equity at all levels within the Union, in practice EU Cohesion Policy is designed and administered by national governments in association with Brussels oversight, and directs investment to regions in a manner that seeks to balance the twin goals of efficiency and equity. Thus, it might be a waste of resources to build a motorway through a poor region, unless it connected large conurbations in adjoining regions. A more appropriate type of policy for the poor region might be to make use of the Social Fund element to increase human capital in poorer – usually rural – regions. This would facilitate outward migration in early stages of development, with the prospects of return migration as the congestion-driven spillover from richer regions start to open opportunities in less developed regions. This, in essence, is the Irish model, operated at national level initially in a state that is smaller than many of the regions of the rest of the EU (Bradley, 2008).

Operating in parallel with Cohesion Policy, domestically funded social and income support transfers can often be much larger than investment expenditures. If there is a problem with EU Cohesion Policy, perhaps one ought to seek it by examining the uneasy relationship between these two kinds of regional support. Examining EU Cohesion Policy in isolation, at the regional level, as Boldrin and Canova, 2001 did, almost certainly leads one to false conclusions about how states and their sub-regions actually develop and grow, and what policies are required to assist this process.

If one is to avoid the traps of the Ederveen et al., 2006 and Boldrin and Canova, 2001 approaches – namely, a flawed analytic methodology and a misleading assertion of the aim of cohesion policy - one must turn to deeper methodological approaches. The first is the much criticised one based on macroeconomic models, and is entirely in keeping with Rodrik's suggestion that "one needs to look for direct evidence about the channels through which policies are hypothesized to operate".[14] Much of the previous use of models to study Structural Funds needs to be re-examined and improved, but offers the best chance of understanding how cohesion policy works.

The second approach is to develop better microeconomic tools. There is unanimous agreement on the need for policy intervention when the efficiency of markets is limited in the context of "market failures". One prominent type of market failure is the existence of a public good, since private producers will tend to undersupply such goods or services relative to the social optimum. It is appropriate for the government to act to ensure that such goods are made available. However, a public good is just one of the many types of externalities which may exist. Policy interventions that try to adjust for these distortions or sources of market failure will inevitably be imperfect. A policy therefore has to be evaluated to see whether it makes the best possible correction towards efficient functioning without inducing undue adverse side-effects. The best way to approach the evaluation of individual cohesion policy measures is to identify the distortion which it principally addresses, and to assess its performance chiefly as a correction for that distortion. Practical approaches to implementing such suggestions in the context of EU Structural Funds are set out in Honohan et al., 1997 and Bradley et al., 2006.

Countries need to look deeper into the manner in which EU Cohesion Policy is actually designed and implemented, including the manner in which

[14] Promising results in this area were derived recently using the new IMF *GIMF* model, which imposes micro foundations in a way that takes full account of likely deviations from more conventional assumptions of full optimizing behaviour in perfectly flexible markets (Kumhof and Laxton, 2008; Allard and Annett, 2008).

national governments operate parallel regional policies with no reference to Brussels. Only by making use of more searching and rigorous models is it likely to be possible to deliver verdicts on whether or not EU cohesion policy deserves to be given a continued role in this important area of integration. Dogmatic conclusions reached in the literature, mainly negative, but the point also applies to supportive conclusions, are premature and almost certainly wrong.

How can Lisbon fit into the future of cohesion policy in a way that supports its aims, rather than diluting them? The Irish experience prompts the following advice to new member states and their regions.

First, make much deeper efforts to build growth and development strategies around EU-aided National Development Plans and Structural Funds in ways that are tightly linked to your country's needs. These provide a unique opportunity to produce a step-change in economic performance. Focus on getting the *National Strategic Reference Framework (NSRF)* right, and success with the Lisbon Strategy will follow naturally.

Second, use the post-1989 experience of the older EU member states as guidelines, and learn from their practice as they moved through different stages of development. Here, the cases of Portugal (a medium-sized economy), Ireland (a small economy) as well as the Spanish regions are particularly relevant.

Third, do not become complacent about the level of educational and training qualifications in your countries, or become blind you to the necessity of continuing to prioritise human resources in all its aspects: education, technical skills, re-integration of the socially excluded, basic business research and training, etc.

Fourth, link the *NSRF* closely with industrial and service sector strategic policy thinking, and try to ensure that they are mutually reinforcing. The Irish experience here is interesting and informative. But countries like Estonia are drawing lessons from both the Irish and Nordic success stories. There are dramatic differences between the approach adopted by the successful Nordic states (e.g., Finland, Denmark and Sweden) – based on building indigenous industrial strengths - and the path taken by Ireland – based mainly on success in attracting high quality foreign direct investment.

There are many different ways for small countries and for regions to succeed. And different approaches will make different demands both of cohesion policy and of the Lisbon Strategy. By all means strive to embrace the Lisbon Strategy, but do so as a by-product of a coherent national growth strategy and not as an end in itself!

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