Assessment Criteria for a Sustainability Impact Assessment in Europe

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Abstract

Public economics usually emphasizes the task of "setting the framework conditions" for markets. In formulating such setting, however, research has to deal with imperfect markets, uncertainties, and unknown impacts of any regulatory reform. Against this background, the EU undertakes efforts towards 'regulatory impact assessment' and 'sustainability impact assessment'. The following article derives assessment criteria for any sustainability impact assessment from different strands of economics such as innovation research, new institutional economics and evolutionary economics. It starts from some observations on framing activities, stating that economic policy can be conceptualised as institutional reform rather than a one-off activity. It then elaborates several criteria. Beginning with the established notions of 'relevance', 'effectiveness', 'efficiency' and 'adaptation flexibility', the article introduces explicit sub-criteria and guiding questions for thorough analysis. Those eleven criteria are problem identification, decentral solutions & compensation, target setting, target's implementation, cost reduction, positive side effects, negative side effects, freedom and flexibility, evaluation and review, participation und transparency, control. Some thoughts are made towards an application. The paper is geared towards impact assessments of cross-cutting approaches. The paper concludes with some remarks on the role of those within sustainability strategies.

JEL Categories: B52, H11, H41

Keywords: Sustainability, Innovation, Instruments, Governance, Regulatory Impacts

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1. Introduction

The notion of sustainability is well established. It is increasingly used not only in the environmental camp, but also in the realms of social security systems and financial stability. Though this might be seen as elusive, it leads to the acknowledgement of the demand for cross-cutting policy approaches. Such demand for cross-cutting approaches is also characterized by a shift from governments to governance, meaning that institutions and actors outside the state become more important. It is claimed that not only the acceptance of those actors is pivotal for any implementation of policies, but that corporate and societal actors play a role in policy formulation, precautionary measures, and innovation. General drivers of change from governments to governance can be seen as follows (Jordan/Wurzel/Zito 2003: 202f.):

- Dissatisfaction with environmental regulation: Concerns about implementation costs in bureaucracy, compliance costs in industry, and the disability to get through to small and medium-sized enterprises as well as to private households were raised in most OECD countries during the 90s. The call is for cross-cutting flexible approaches spurring innovation (EC 2004).

- Shift in the regulatory debate: Previous arguments about the merits of state-driven policies were perceived less attractive than their counterparts. A governance 'turn' in most OECD countries spurred privatisation programmes and enabling of private activities alike. Important to note, the sustainability paradigm has not been directly aligned to these debates, but has also highlighted some limitations of traditional regulation (Berkhout/ Leach/ Scoones 2003).
- Market integration and influence of the European Union: Most OECD countries and in particular the European Union have intensified their efforts for market integration, i.e. an harmonization of legal institutions with the aim of reducing transaction costs for international business operations while coordinating economic policies. These efforts almost automatically have required a more systematic thinking about appropriate levels of action and about cross-cutting approaches. As regard to sustainable development, EU's regulatory kitchen is not yet designed by a clear concept but rather experiments in different directions of economic incentives, voluntary agreements, eco-labels, and formalized planning tools.

Given that debate, the following article will develop assessment criteria for sustainability policies. The assessment criteria are geared towards what is called "regulatory impact assessment" by the European Commission (COM/2002/276 final). Another reference can be made to the provision of services where the recent annual report of the World Bank (2004) puts great emphasis on. The proposition is that such impact assessment ought to entail far more than setting a one-off framework for internalising externalities or an upgrading of environmental indicators. Our research questions are as follows: How can policy fulfil its task - in awareness of its own knowledge deficits, and at minimal regulatory cost? How can policy minimize the costs of market coordination and generate new knowledge for solving problems in a dynamic world? Policy in this regard can be analysed as a collective learning process in which the subsidiary effects concomitant with the shift of government tasks to market-based institutions play a major role (Fig. 1).

● short introduction to the COM IA and what is presented in the text

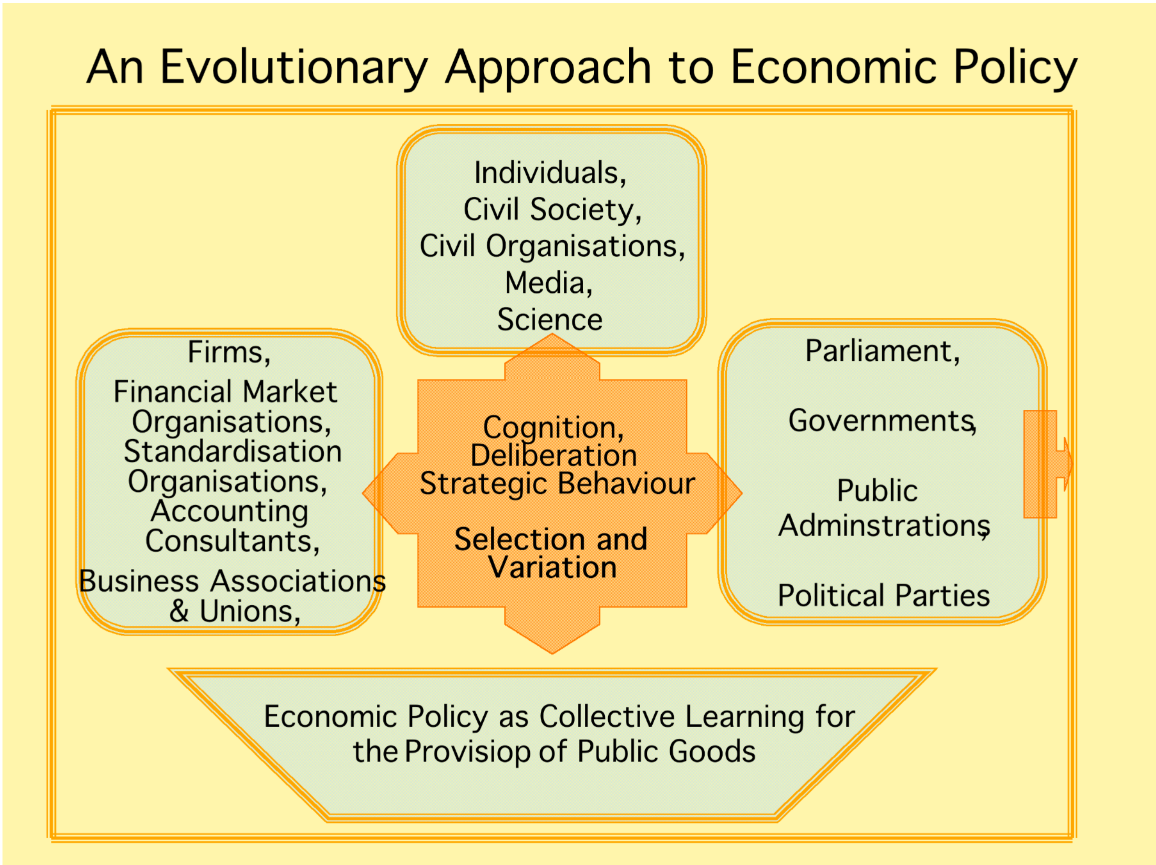
⇨ COM IA criteria vs. governance criteria

Our article will test the feasibility of innovation research, new institutional economics and evolutionary economics and bring its theories to scientific analysis of policies and governance systems. Those approaches (Dixit 2000, Pelikan/Wegner 2003, Witt 2001) hypothetically prove a helpful device for analytically integrating the necessary theoretical elements in a way not permitted by other approaches. Public choice theory assumes that political units act on shared motivations and have an awareness of interest groups, leaving little room for learning processes. Welfare economics, in turn, runs into analytical problems when it comes to bridging knowledge deficits and second-best options. While New Institutional Economics is certainly helpful in examining political processes, it may take insufficient account of learning processes and processes of dynamic change. The regulatory approach offers interesting points of contact with evolutionary economics: as the borderline between state and economy grows blurred, the stabilizing function previously exercised by the legal framework increasingly shifts to adaptive processes of institutions located somewhere between market and government. Our approach addresses the deficits described above. We expect that our scope will be helpful in applying theoretically derived principles of open development and experimentalism operationally. Finally, policy-oriented conclusions will be drawn.

2. Legal Frameworks and Institutional Reforms

Reforming and designing institutions are functions in policy that can hardly be conceived of as one-off framework setting activities. According to Pierson (2000) and Wegner (1996), the fundamental difficulty of setting a legal frame lies in forecasting side effects and the reactions of innovative market players. Moreover, there is a causal relationship between framework setting and political lobbying: the stronger the regulating administration stands on a specific regulation, the fiercer the interest groups' efforts to influence the decision in the making. A realistic compromise entails granting exemptions of the kind Posen (1998) has compared on an international level.

Figure 1: An Evolutionary Approach to Economic Theory



Source: Own compilation.

[Description of figure 1:]

In Figure 1 the double lines refer to institutions. Organizations act in an institutional setting. Political decision-makers decide upon outer institutions (e.g. a constitution). [ausführlicher]

This, however, results in high costs for eliminating exemptions. According to Dixit (2000: 146), the cost of change depends on the rationalities of the actors involved. Any well-meant change in regulations can therefore result in higher transactions costs. In other words, a change in the regulatory framework is only beneficial if the costs of change are lower than the costs of retaining existing regulations. Some inconsistencies between old and new regulations will only emerge as they are implemented. While according to Witt (2001: 11), evolutionary economists may even welcome this process because it submits institutional innovations to a kind of stress testing, it also means that assessing the effect of a regulation before it passes into law involves prohibitive costs.

From an evolutionary perspective, the rationality of one-off regulations is relative. According to the "knowledge-creating competition" model (Kerber 1997), new framework conditions only have an immediate effect on the business selection environment if they include binding regulations and penalize non-compliance. Government regulation for business does not automatically affect financial institutions and standardization authorities. Indirect stimuli coming from formal institutions – such as the aims and principles underlying laws – require reinforcement through other stimuli. Dynamic and open market processes constantly react to a wide range of stimuli, so those coming from formal institutions have to be reinforced if they are to be effective. Innovators, imitators and laggards will react to different doses. Soft incentives will suffice to activate open-minded market players, while others will only take action when threatened by closure or insolvency. Adaptive flexibility therefore is crucial to the effectiveness of any formal framework,[1] and a keen understanding of its importance is what sets the evolutionary approach apart from welfare economics and static regulatory policy. In this respect, the jurisprudential responsive regulation approach offers interesting points of contact with evolutionary economics (Ayres/Braithwaite 1992, Nonet/Selznick 1978).

If we assume the existence of both knowledge deficits and strategic behaviour, adaptation processes and permanent review mechanisms are imperative. Institutions in the market may be able to take over some functions of external institutions, but they will always require some form of supervision involving possibilities of adjustment. Reforming and designing adequate external institutions becomes a permanent economic policy task. The question is how policy can shape institutions such that they support the processes of discovery and selection that come with competition. In the following, a number of assessment criteria will be described and their applicability discussed.[2] They are framed in terms that make them useful in the scientific analysis and assessment of regulatory policies, taking up the methodological challenge to draw specific conclusions from general insights and theories.

3. The Impact Assessment of the European Commission

In this chapter we will take a look at the present impact assessment system conducted by the European Union. The basic of the present system date back to the late 1990s when the European Commission started a *business impact assessment* [Reference] as a pilot project. [desription of BIA system and the project]

● development of IA in the EU, (very short) reason for IA -> externalities, public goods, weak competition, incomplete markets, imperfect information, regulatory failures, political context, key documents

● aims of IA

● Background IA system, BIA background, BIA pilot project (+report), White paper on Governance. better lawmaking process , Mandelkern report

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1 For the purpose of the present paper, we will define adaptation as the maintenance of functional processes in systems. Adaptation results from cognitive and institutional influences and is not limited to adaptation to the social environment. Flexibility refers to the depth and speed of adaptive processes. A high adaptive flexibility can therefore be characterized as the ability of a system to change quickly and thoroughly so as to maintain the functionality of its processes.

2 Wegner (1996, 214) has underscored the desirability of such assessment criteria.

● relation to the Götheborg strategy and Lisbon agenda, political context, reference to sustainable development

● COM report on IA, new IA system started in 2003, tri-fold IA-system: environmental, economic, social; IA as one tool, aid to decision making, single-sector IA replaced by integrated system

● System of the IA, how does the process work, coverage, annual policy strategy, two stage process: preliminary and extended IA, time-frame for IA, consultation of external expert (also conclusions), annual policy strategy

● problem, objective, policy options, impacts, results; table with the COM criteria, proportionate analysis

● (brief reference to policy instruments (self-regulation, open method of coordination, guidelines, market-based instruments, C&C, direct interventions, taxes …)

● economic methods for IA (cost-benefit-analysis, cost-effectiveness-analysis, mca

● IA in practice: reference to the IA handbooks, short description of the system; examples of IA (current and past?

● Übergang: overview of the assessment criteria of the COM IA (table?)

● after that comparison of the two catalogues of criteria (see also conclusions)

4. Deriving Assessment Criteria from recent Research

The primary categories addressed by our analysis are relevance, effectiveness, efficiency and adaptation flexibility. Relevance means that the planned changes are tested for legitimacy to ascertain whether state intervention is necessary. The criterion of effectiveness allows analysing targets and ways of reaching them. Efficiency has to do with the costs of regulation and as a criterion stimulates the search for lowest-cost combinations; it is discussed in detail below. Adaptive flexibility, one of the key features of evolutionary economics, takes account of learning processes and aims to identify improved solutions. This rough classification covers the spectrum of assessment possibilities, which is why also the European Commission applies them in policy evaluation. The following section will make them more operational.

Testing legitimacy to ascertain the *relevance* of any specific reform is an approach that can be traced back epistemologically to Immanuel Kant’s principle of universalisation and to John Rawls’s idea of action taken behind a “veil of ignorance.” A legitimacy test for state measures is needed in order to assess the ability of self-regulation to correct deficits and to evaluate corresponding proposals. These require careful evaluation, because regulatory failures might be worse than market failures. Factors included in the scope of this test include which specific problem is being addressed, which potential damage costs may be expected, and how great is the political pressure to take action. In this context it also makes sense to pre-assess self-regulation, i.e. to determine whether social groups are able negotiate solutions, and which mediating function the law or the state should assume in the process. Alternatively referring to Ronald Coase, assessment can address regulations to strengthen the legal position of particular groups if their articulation would promote decentralized learning processes, and if no immediate risks have to be averted. The legitimacy test usually privileges institutional reform over and above the establishment of new institutions.

If the results of the legitimacy test are positive, the next step is to assess the effectiveness of institutional reform. Is there a clearly stated *target* with a clear analytical relationship to the specific problem calling for regulation? A verifiable goal is desirable in empirical assessment. Clear criteria for measuring success allow observing how goals are reached over time, making it possible to downsize an institution as the problems in its remit are solved, and thus to prevent institutional structures from growing ossified and obsolete. Where the target is not clearly defined, effectiveness can nevertheless be assessed by relating a baseline year to a business-as-usual scenario and a scenario of changes effected by regulation. If several targets exist, the relationships among them have to be taken into account – including targets set earlier that entail activities with an impact on the achievement (or not) of new targets. Our assessment approach – as we see it – does not stipulate complete consistency in balancing conflicting goals, though fundamental inconsistencies are to be avoided.

Evolutionary economics takes a sceptical but not hostile view of policy targets. Although Wegner (1996: 39) suspects that targets "collide with all evolutionary ideas of economic order," it can be argued that evolution, however dynamic, has a direction. Eggertsson (1997: 1197) similarly supports a process of economic policy development that includes the setting of targets. Meier and Slembeck (1998: 84ff., 246ff.) also subscribe to this view. The kind of open development that evolutionary economics calls for, hence, depends on a general orientation for which targets are useful.

To combat sceptical views, the assessment of targets also extends to possible measures and potentials for reaching them. Does a given measure propel developments towards the target? Does it at least achieve a quantitative deviation from the norm or from a minimum target? Technically speaking that involves bottom-up analyses that establish which solutions are close to market maturity. Grossekettler (1996: 548) describes these steps in assessment as the "condition of impulse direction" and the "condition of impulse strength."

The assessment of effectiveness involves two steps for weeding out inappropriate institutional arrangements. The first step excludes obviously ineffective reforms from further consideration. In a second step, the potentials of self-regulation are reassessed. Following the Kaldor-Hicks criterion (Zerbe 2001: 4ff.), which says that it is better for social groups to compensate each other than for a central authority to intervene, the possibilities of decentralized control are compared to the risks of state regulation. Does the new governance approach fundamentally limit market processes, and does it interfere more strongly with the decision-making power of organizations (e.g. associations) and individuals than is necessary for eliminating market deficits? This second step serves to smooth out obvious snags. The remaining approaches can then be ranked in a provisional order.

Defining a normative criterion is the main problem in *efficiency* assessment. New Institutional Economics is just as sceptical as evolutionary economics when it comes to a static concept of allocation efficiency. In our view, however, this scepticism does not rule out efficiency assessments. Efficiency assessments should address transaction costs, learning processes and externalities. In our understanding of economic policy as a collective learning process, the dynamic efficiency of coordinated learning processes is more important than static allocation efficiency. In addition to static allocation efficiency, dynamic coordination efficiency also involves a) long-term effects of successive, incremental reforms, b) radical reform (changes in the system), c) generation of new knowledge about solutions that go beyond alleviating situations of asymmetric information and d) appropriate incentives from economic policy. The concept includes both actor initiatives and reactions from the social environment. Instructive background is to be found in Ahrens (2002: 98f.), Pelikan (ibid/Wegner 2003: 29ff.), and Metcalfe (2001). The assessment criterion of adaptive flexibility also reflects this concept of efficiency.

An important criterion for assessing the efficiency of new institutions results from the standard function of reducing transaction costs (North 1998, Nelson/Sampat 2001). According to Dixit (2000: 148), economic policy should take care at least to *prevent new or additional transaction costs* when introducing new regulations, its goal being a stable system that reduces the insecurity often attached to interactions. Reducing information asymmetries between social groups is therefore a priority in this context. Measures ensuring that suppliers and consumers have equal access to information, and correcting the traditional asymmetry that is so detrimental to small and medium-sized enterprises, have the overall effect of reducing transaction costs in the economy. Admittedly, simply providing access to information is not enough; actors also need support in acquiring knowledge.

A further assessment criterion, the *reduction of negative external costs*, derives from the general function of institutions as constraints. A new regulation that causes additional external costs is to be rejected unless a higher net benefit can be demonstrated. This criterion can also be applied when reducing external costs was the explicit purpose of testing an existing regulation. In this case analysis will determine which other external costs would be affected by a change in regulations, and which negative side effects such a change would have. Methodologically the reduction of negative external costs can be assessed through economic analyses as well as empirical studies of the articulation of interest groups. Since the psychology of perceived ownership and loss aversion leads to a disproportional articulation of potential losers, flanking economic analyses are essential.

External costs can be made to “disappear” by shifting them geographically. Economic policy makers and lobbying groups share an interest in shifting burdens, which then occasion costs in other parts of the world – an effect that needs to be borne in mind when researching economic systems and effects. To support longer-term improvements (Dixit 2000: 148), analyses of the effects of economic policy must identify where costs are being shifted, and estimate the extent of these costs. On this basis alternative arrangements can be devised that reduce burden-shifting through collaborative and compensative solutions.

Part of the test should address the “Delaware effect”, a term that describes how a reduction of institutional constraints in one area or state puts pressure on others to follow suit.[3] The phenomenon is also described in terms of a “race to the bottom”, or alternatively “race to the top”, where positive effects on regions at the forefront of development are discernible (Vogel 2000). Weak and stagnant systems in developing countries are characterized as “stuck at the bottom” (Porter 1999) in contrast to the strong and dynamic systems of industrialized countries. The potential pressure to reduce constraints is subsumed in the criterion of external costs, as this yields a logical evaluation. Relaxing regulations, we would like to argue, is legitimate where this does not cause new external costs or burden-shifting, and where it is the result of democratic processes. In

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[3] The effects of lax corporate law emerged clearly in the American state of Delaware. Neighbouring states adapted their regulations in a bid to prevent enterprises from moving away. State regulations on company reporting were tightened at a later date. I would like to thank Bernhard Nagel for communicating information on the current situation.

such a context, lowering standards can be seen as a sensible way of exploiting a region's comparative cost advantages. However, if the reduction of certain standards causes new external costs or shifts them elsewhere, our assessment will arrive at a critical evaluation. Sykes (2000: 262) distinguishes social and environmental standards, saying that lower social standards generally do not cause higher external costs,[4] while lower environmental standards always do.

A further assessment criterion based on this principle is the *stimulation of innovation, learning effects and competition.* New regulations should be oriented on the medium rather than the short term, and aim for improvements that go beyond the technologies available in the market. Short periods of transition preclude the necessary processes of adaptation and distort competition in favour of a small number of suppliers. The "knowledge-creating competition" model, in contrast, stipulates medium-term periods of transition that enable companies to test a series of hypotheses and develop specific capacities. Whether a new regulation stimulates competition is therefore an important sub-criterion.

A further assessment criterion deriving from studies on institutional change evaluates the *desired scale and network effects* of new regulations. These effects occur where a potentially high number of users is interlinked; telephony is an obvious example. Centralized regulation is more likely to meet this criterion than decentralized regulation, so it should be carefully weighed against the advantages of decentralization. According to Sykes (2000: 259), harmonization generally proves advantageous where preferences are homogenous, and where external effects need to be taken into account; Trachtman (2000: 337) and Berg (2000: 461) support this view. Conversely, decentralized solutions are to be preferred where preferences are heterogeneous and externalities can be internalised.

Further assessment criteria on *adaptation flexibility* primarily address learning processes in organizations. Derived from findings on interactions between organizations and institutions (North 1998), these criteria also take up Metcalfe's ideas on adaptive learning in politics (2001). They help evaluate the institutional risks of "capture of the regulator" by the regulated interest groups and similar processes. The assessment criteria described in the following address issues related to organizations. They are based on the assumption that institutions, if they are to evolve successfully, have to understand the interplay between rules of the game and players of the game, and should react less to changes in relative prices. Following ideas developed in the context of responsive regulation (Ayres/Braithwaite 1992, Nonet/Selznick 1978), they focus on the activation of third parties that may be expected to have a strong orientation on the common weal (e.g. nongovernmental organizations).

One important assessment criteria may be derived from theories according to which institutions have the function of facilitating action (Nelson/Sampat 2001; Mantzavinos 2001; Metcalfe 2001; Rodrik 2000). The *principle of free implementation and choice of instruments* should therefore guide the design of institutions, with the diverse processes of market implementation always left to decide which technical solutions and associated services are developed. A "blacklist" of banned instruments is to be preferred to a positive list of desired options, as it leaves more possibilities open. The principle of free implementation and choice of instruments should also govern certain markets. For example, although standards of supply may be defined for a national econ-

[4] Exceptions are, for example, health and safety at work, where lower standards have a negative external effect on health.

omy or other economic area, their technical implementation will take different forms and shapes in different regions, taking account of regionally heterogeneous preferences and patterns of demand. In this respect, our approach goes beyond the traditional regulatory principle of allocating an instrument and an agent to each target (Grossekettler 1996: 544ff.). The reason for this departure lies in our understanding of decentralized learning processes as sources of new strategies for reaching any given target. Specifying the use of at least one instrument would pose unnecessary constraints.

An essential criterion for assessing organizations concerns monitoring of any mechamism. This criterion however only applies to regulatory bodies that are, as Karl Popper put it, “properly manned,” i.e. have the status of an organization. Examples are authorities supervising capital markets, regulatory commissions and authorities overseeing natural monopolies, as well as international regimes regulating global collective (or even public) goods.[5] “Unmanned” legal institutions can only be judged by their effects and evolve through legislation and legal precedent. Effective monitoring is vital where principal-agent problems arise and regulation is needed to negotiate interests. Monitoring can operate through supervisory boards or similar bodies, budgetary controlling, auditing and accounting, and regulations on reporting. Generally speaking, ex-post monitoring is less problematic than ex-ante regulation.

Assuming that any institutional reform has to preserve sufficient leeway for flexible adaptation, we would like to discuss *evaluation and review mechanisms* as a further assessment criterion. Though the ideal is a framework that obviates the need to introduce process regulations in retrospect, it is only realistic to postulate a certain adaptive flexibility. Recent research on technical institutional change supports this view (Nelson 2002, Nelson/Sampat 2001, Mantzavinos 2001, North 1998). Adaptive flexibility allows allaying teething troubles, tackling new obstacles and repairing defective framework regulations. Such a mechanism is essential for resolving conflicts of interest where a basic consensus on general principles needs to be reconciled with specific targets or regulations. Institutions for managing conflicting interests, moreover, have to set up formal procedures for resolving conflict. An agent that is given powers and a budget to carry out the institution’s tasks can use a general mandate to gradually establish appropriate mechanisms, as Posen (1998) has shown in the development of money supply and monetary policy. Héritier (2002) discusses this in the context of the European Union. Assessment will have to pay particular attention to the periods of time, procedures and decision-making processes involved in evaluation and review.

A final assessment criterion refers to ideas on deliberation (Ahrens 2002: 134), i.e. institutional development on the basis of articulation and the deliberation of proposals. *Participation and transparency* are assessed in organizations, with the assessment of participation concerning individuals, organizations and new organizational structures. Formal participation of regulated interest groups harbours risks of ossification and collusion. Appropriate mechanisms of participation anchor an institution in informal rules, and deliberative development takes account of clients’ wishes - the mechanism is familiar from stakeholder consultations in companies. Internal participation reduces the risk of individuals being dominated by regulated interest groups. Transparency describes the accessibility of reports and information on individual decisions to outsiders. High transparency exists where the media and representatives of civil society are invited to voice their

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[5] Standard features of organizations include a secretariat, a conference of parties endowed with decision-making powers, and a number of standing committees on which the parties are represented.

opinions. This increases the possibilities of articulating the dissent and external knowledge that make up an institution's selection environment.

All in all that gives us the following assessment criteria for institutional reform and design:

Table 1: Indicative list of criteria (C) and questions for the assessment of cross-cutting governance approaches

	Criteria	Questions
Relevance	(C 1) Process of problem identification, Pressure to act	How and by whom is a relevant problem addressed? To what extent does a consensus about causes, effects, and the need to act exist? How urgent is the need for action seen from the actor's perspective? Does the approach address main actors? Is the process stakeholder-driven? Is the process used for priority area identification in line with other stakeholders' agenda? Is it in line with global or regional trends?
	(C 2) Decentral solutions, Possibilities for Compensation	Is there an obvious link with other policy issues, to whom the approach might add negotiated solutions? Does the include relevant groups of society? Does it lead to an exchange of (financial or other) resources, which is considered fair and does not lead to additional externalities?
Effectiveness	(C3) Targets and strategies	Are there clear and verifiable targets? How consistent are sets of targets in the relevant area beyond the case study? Is the structure suitable for policy deliberations? Does the structure allow for stakeholder participation and interaction on targets and strategies? How consistent is time horizon of targets with appropriate action? Is there a defined norm or a baseline year?
	(C 4) Implementat mechanism ion	Is there a specific action plan with concrete measures? How can the targets and/or the action plan be related to individual action? Are there performance indicator systems? Are these approaches supported by written and continuously reviewed routines? Do these approaches entail a monitoring of costs (see C5)?
Efficiency	(C 5) Cost reduction	Which internal and external damage costs does the network try to address? I there a visible strive for minimizing overall costs? In what ways are transaction costs included? In what ways is there a reduction of external costs? In what ways might new externalities emerge?
	(C 6) Positive Side Effects	In what ways does the approach spur incremental or radical innovation? In what ways are processes of diffusion enhanced? Are there tendencies for inertia or is there a systematic effort towards openness for new ideas? What kind of benefits emerge (tangible and non-tangible assets)? To what extent can the approach exploit economies of scale and/or network externalities?
	(C 7) Negative Side Effects	Are there systemic leakages, which may lead to problem shifting? Are there incentives for free riding? Are there new and additional negative externalities?
Adaptation flexibility	(C 8) Freedom and flexibility	Can relevant actors freely choose among a set of instruments? Is there sufficient flexibility to make investment decisions consistent with the approach's aims? Can actors develop new tools that have an influence on the approach?
	(C 9) Evaluation and review	Is there a formal approach for evaluation and/or review? Does it include reviewers outside the approach? Are there clear performance criteria that help to readjust the approach?
	(C 10) Participation und Transparency	What approaches for participation and transparency exist? Are all relevant groups (affected parties) members of the approach? Do public interest actors hold specific competences?

		Is the process open for new participants?
	(C 11) Control	Which formal and informal control approaches exist? Is there a sufficient division of competences between controlling and controlled actors? What processes ensure independence and power of control over time? What sanctions are foreseen in case of non-compliance?

Source: Own Compilation

5. Research meets Policy: A Comparison with the EU IA System / The EU IA in practice

● examples for IA's

● Is this IA system feasible?

Each assessment criterion is based on research in its specific area. Combining the criteria enables research to assess different cross-cutting governance approaches in preparation for making decisions. Assessment criteria are helpful in sensitivity analyses, detecting negative side effects, forecasting possible outcomes, and identifying organizational problems. On this basis, empirical research can compare institutions or, more precisely, the effects of institutions for the provision of collective goods. For economic policy, that means increased options for indirect regulation. The systematic exploration of alternatives provided by activities at lower and private levels allows subsidiarity effects.

Methodological studies indicate that there is no single, perfect institution against which all other options pale (Nelson/Sampat 2001; Rodrik 2000). According our approach, no institution is neutral in the sense of being independent of its context of application. The issue an institution is meant to solve and the institutional environment play decisive roles. If we assume limited capacities for assimilating information, economic policy emerges as an adventurous journey of discovery rather than a rational process of optimisation (Eggertsson 1997: 1195). The task of institutional analysis is therefore to systematically compare various second-best solutions and develop rules for solving specific problems. This method corresponds to those concepts of rationality, according to which individuals develop context-dependent decision-making rules and the trend and dynamics of competitive processes derive from the institutional context (Mantzavinos 2001). Economic policy analysis is thus able to propose successive measures of improvement that move beyond the zero-sum game that Stiglitz (1998: 14) diagnosed in typical decision-making processes. Such an approach improves the institutional framework's ability to adapt to new situations and can be regarded as an evolutionary version of regulatory policy. The assessment criteria described here also help in implementing ideas on 'process policy' put forward by Wegner (1996: 156ff., 220ff.).

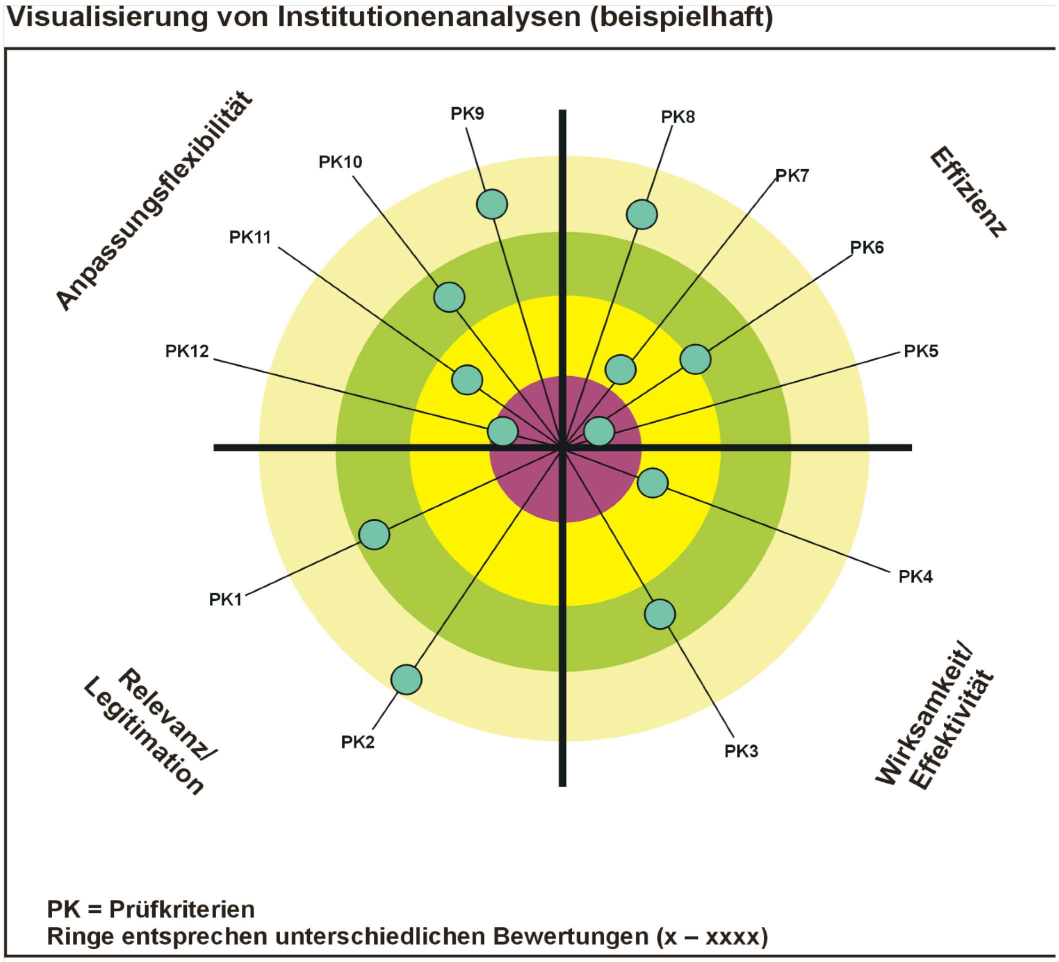
To reach an overall evaluation of different proposals, however, the assessment criteria need to be specified in more detail. A monetary evaluation of effects is highly difficult to model as there is hardly a sufficient basis of information for calculating probabilities, yielding only approximations that are at best rough estimates. This is especially relevant for cross-cutting approaches. With organizations, on the other hand, monetary evaluation is possible as certain relevant types of cost arise (fixed and variable costs, labour and material costs, investments). In an overall evaluation, a scoring system could be used to compare different institutions, with questionnaires to break down and specify the assessment criteria (see above). Each criterion could be awarded four points determined through ordinal scaling, with a table to illustrate results such that a transparent evaluation of the pros and cons of a specific approach is possible. Fine-tuning and review methods as used in scientific policy consulting have proved helpful in this context. In the mid-term, a standardized evaluation matrix for regulatory impact analysis is definitely a possibility.

Table 5: Significance Scoring for Impact Assessments

1 = negative impact compared with the base situation
2 = non-significant impact compared with the base situation
3 = positive impact compared with the base situation
4 = significant positive impact compared with the base situation

Source: Own Compilation.

Figure 2: Visualisation of Assessments



Impact assessments are usually confronted to lacks of reliable and homogenous data, which can be characterized as general (the availability of coherent data being the exception). In particular if private and societal actors are involved, the question of data availability gets crucial. For developing countries data gaps are affecting almost any field (from economic to social and environment). Even in the economic field when some data are available, they are often not reliable because of the importance of informal sectors. Even for developed countries data gaps exist or data are not reliable (Bleischwitz/Hennicke 2004, chap. 5). Questions to be addressed in empirical studies are:

- Are the data sufficiently available?
- How can the data be compared in order to validate them?
- Can data availability significantly influence the content and validity of the assessment?

6. Conclusions

The present paper uses innovation, institutional and evolutionary analyses as the basis for setting up assessment criteria that can be applied in scientific policy consulting. Our analysis may therefore be expected to show to advantage in tackling the challenges of dealing with bounded knowledge, involving non-governmental actors, developing and implementing innovations and balancing framework and process regulations. Traditional approaches such as cost-benefit analysis have definite methodological deficits in these areas, where, we may conclude, our analysis can complement or even replace traditional methods of evaluating regulatory impacts and ensuing governance systems. Its application place is to be found in areas where heterogeneous preferences prevail and technological change offers potential scope for the provision of collective goods, dependent upon flexible cross-cutting governance approaches. It is our claim that these conditions apply to a large number of cases.

The area of application for our approach seems vast. Policy areas like climate, energy, mobility, agriculture, waste, and housing are obvious areas of application because either complex existing regulation or new cross-cutting approaches go beyond traditional impact analysis. In these areas, one can expect a mixture of economic incentives, voluntary action, and legal incentives, where more traditional assessments are likely to fall short. Our approach might be useful

- To pre-select a few instruments from various sources; an econometric modelling of those few approaches can then be done later on.

- To analyse implementation of ongoing processes driven by various actors and networks where usually unforeseeable side effects emerge; it can be used to review those processes and come up with suggestions for adaptation.

● How do the IA criteria of the COM match with our analysed criteria? criteria developed from governance vs. COM-criteria

● methodology needs to be refined, When and which (economic) method to use? (more) transparency needed, quality of IA's (IA needs to get better, training of the staff), involvement of other service, relation of economic, environmental and social dimension

Policy analysis for sustainability will have to rethink individual sectoral approaches and prevailing regulatory tools. Energy, for instance, certainly is important but ought to be combined with other areas of environmental relief. Horizontal diffusion will become more important in the next decade of sustainability research. Relaxation on some carefully defined regulations in certain sectors can be legitimate as long as progress in other areas can be achieved. Companies undertaking pioneering efforts in one area or internationally will certainly want less pressure from traditional regulation (see e.g. BP demanding tax relief from UK government). Our paper suggests that well-designed efforts can open up cross-sectoral markets, and also includes some criteria toward a compensation scheme for assessing cross-sectoral approaches. Beyond the areas mentioned, our assessment methodology might also be helpful in areas like provision of public services, economic policy, technology policy, trade policy, and development cooperation.

The present article aims to provide one module in a new form of economic policy consulting that is process-oriented and actively involves actors from the private sector. Policy for sustainability, it turns out, is a collective learning process. Some tentative empirical analysis (see acknowledgements) seems to reveal both the necessity as well as the practicability of our approach.

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