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Impact Assessment and the Liberalization of the EU Energy Markets: Evidence-Based Policy-Making or Policy-Based Evidence-Making?

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Abstract

The European Commission proposal on the liberalization of energy markets has been widely debated in policy, stakeholder and academic circles both for its content and the potential consequences for the structure of the EU gas and electricity markets. However, little has been said about the empirical evidence produced by the European Commission to support this legislative package. Since the Impact Assessment (IA) system has been in place, there have been concerns regarding quality and adequateness, especially when quantifying costs, benefits and risks, selecting policy options and considering stakeholder opinions. This article examines how these crucial issues were factored into the IA on the liberalization of EU energy markets. It is concluded that the selected policy option reflects the position of some stakeholders at the expense of the available evidence on its impacts on markets, society and the environment.

Introduction

Even before the third legislative package on energy liberalization was issued on 19 September 2007, its content and potential consequences were already discussed in policy, stakeholder and academic circles.

In the policy arena, the focus was on the divergences between the European Commission and a number of Member States, including France and Germany. They opposed the initiative of the European Commission towards

'ownership unbundling', by arguing that splitting up energy firms was not the only measure for accelerating the dynamics of competition (BWT, 2007). The UK, Denmark and the Netherlands, on the contrary, were active promoters of 'ownership unbundling'.[1]

With regards to business stakeholders, the consultation carried out by the European Commission showed a significant level of support for 'ownership unbundling' measures. However, there were some significant exceptions. State-owned group Gaz de France, for instance, criticized 'ownership unbundling' for being unveiled by the Commission as 'inefficient' and 'dangerous'.[2]

Academic debates, as far as this author is concerned, have evolved around the following issues: the economic advantages (Lowe *et al*., 2007) and drawbacks (Thomas, 2007) of ownership unbundling (Glachant and Lévêque, 2007); the effects of liberalizing the energy market (Ranci, 2007a); the changing role of energy regulators (Groenendijk, 2007); co-operation between energy regulators (Ranci, 2007b); the limited options for consumers to influence the generation mix (Brenda and Palmer, 2007); the French position on European energy policy (Meritet, 2007); and the risks coming from liberalization (Domanico, 2007).[3] Little has been said about the empirical evidence produced by the European Commission to support this legislative package.

In order to support the proposal empirically, the European Commission produced an Impact Assessment (IA), which was criticized by the European Parliament and Germany. Criticisms to individual IAs are not new to the European Commission (Evaluation Partnership, 2007). Since the IA system has been in place, concerns have been expressed regarding its quality and adequateness, especially with regards to quantification of impacts, selection of policy alternatives and inclusion of stakeholder opinions. Although several studies have been performed on the quality of IA in Europe (Cecot *et al*., 2009; Kirkpatrick and Lee, 2004; Meuwese, 2008; Renda, 2006; Torriti, 2007a), the analysts' main focus thus far has been on the process and quality of large samples of IAs taken collectively. With few exceptions, limited

[1] 'Ownership unbundling' is the separation of powers in companies that control both energy generation and transmission.

[2] Didier Sire, head of strategy at Gaz de France, speaking to press said that ownership unbundling 'does not resolve the real issues' such as lack of regulatory and market integration at European level (Brussels, 18 September 2007, see also «http://www.euractiv.com/en/energy/gdf-warns-dangerous-eu-energy-liberalization-plans/article-166849»).

[3] In addition, the discussion in the media was centred on the divide between actors in the energy sector. For instance: 'Le projet de libéralisation du marché de l'énergie à l'origine d'une intense bataille entre Bruxelles, les industriels du secteur, et les Etats', *Le Monde*, Philippe Ricard, article published on 19 September 2007. A study by Osservatorio di Pavia (2007) and Extrapola defined the priority topics of the media as to the topic on liberalization of the EU energy market as follows: environment, finance, performance and technology. The study mainly consisted of a content analysis of online information for the period between 1 July and 30 September 2007.

analysis has been performed on individual IAs. What is more, no study has focused on IAs on EU energy policies. This article aims to fill this gap by examining the role of IA in the EU Third Package on the liberalization of the EU energy markets.

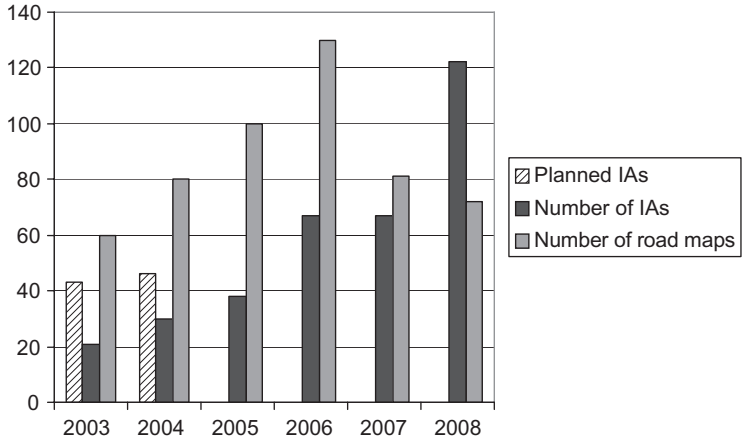
The reasons behind the choice of this case study are intrinsically associated with emphasis in the literature on the three issues of quantification of impacts (Hahn and Litan, 2005; Viscusi, 2006), selection of policy options (Radaelli, 2003) and stakeholder consultation (Meuwese, 2008). First, compared to other sectors, EU IAs have the advantage of being propelled by a significant amount of data on costs and benefits, and by clearly defined elements of risk. Hence, the stakeholder consultation on the liberalization of energy markets is more likely to be empirically substantiated by significant data than consultations in other sectors. Second, the choice of policy options, like in other EU IAs, is particularly problematic, given the political opposition by some Member States on specific options, for example, 'ownership unbundling'. Third, the IA on the liberalization of the EU energy markets differs from other IAs, which typically assess microeconomic impacts only, as it attempts to assess macroeconomic impacts. This analytical 'exception', with emphasis on measuring economic growth, unemployment and inflation, makes the IA on the liberalization of energy markets particularly interesting.

The article commences by providing background information regarding IAs and the 'better regulation' initiative in EU policy-making. Section II critically describes the context of the IA on the Liberalization of Energy Markets. Section III examines how 'better regulation' principles have been taken into account in the selection of policy options. Section IV describes how stakeholder opinions were taken into account in the IA report. Section V analyses the model used for assessing and quantifying the macroeconomic impacts of 'ownership unbundling'. The conclusions place this case in prospective with regards to other EU IAs.

I. The Impact Assessment System of the European Commission

Since the year 2003 the European Commission has employed an integrated IA system to estimate *ex ante* the impacts of its policy and regulatory proposals in economic, social and environmental terms. In principle, IAs are intended to provide groundwork for evidence-based policy-making, not only by assessing the impact of the proposals in terms of cost, benefit and risk, but also by opening the spectrum of policy options and systematically including stakeholder opinions in the decision-making. Because IAs are designed with the aim of improving the quality of regulation, they make part of the EU 'better

Figure 1: Number of EU Impact Assessments (2003–08)



Source: «http://ec.europa.eu/governance/impact/index_en.htm».

regulation' agenda. The concept of 'better regulation' is a form of meta-policy, applied to the whole spectrum of policy areas, encompassing a range of tools. These include IAs, and also simplification of existing policies, reduction of administrative burdens and so on. Ultimately the concept of 'better regulation' implies that European laws and regulation should be targeted, proportionate to need and designed to cut red tape.

The EU IA procedure is based on two stages: a road map (or preliminary Impact Assessment) and an (extended) Impact Assessment. Road maps are automatically made for all legislative and non-legislative proposals. The extended version of an IA is intended to be 'a more in-depth analysis of the potential impacts on the economy, on society and on the environment' (Commission, 2009). The decision on the depth of the analysis is left to the DG responsible for the policy proposal (Allio, 2007).

To the date of this article the European Commission has carried out more than 200 IAs. Figure 1 displays the number of preliminary and extended Impact Assessments carried out between 2003 and 2008. Until 2004, the European Commission planned the exact number of extended Impact Assessments in the Strategic Planning and Programming Cycle. In 2008 a vast number of IAs which were pending from previous years were completed. As explained below, an increase in the quantity of IAs did not necessarily correspond to an increase in their quality (Renda, 2006).

The IA reports vary substantially in terms of content and length. In principle, all IAs address the three pillars of economics, the environment and

social issues. They integrate the features of regulatory impact analysis, sustainable impact assessment and other types of *ex ante* policy appraisals. The template of the IA report consists of the following sections: problem identification; definition of objectives; developing main policy options; analysis of impacts; comparing the options; monitoring and evaluation.

The academic and policy literature agrees when defining the sections on policy options, consultation and analysis of impacts as the core elements of an IA. It is conveyed that IAs are potentially very useful supports to policy-making, provided that policy-makers (i) select the policy options according to a transparent rationale (Radaelli, 2003); (ii) include stakeholder concerns and address them (Majone, 2001; Meuwese, 2008); and (iii) apply economic and risk analysis techniques to quantify and – where possible – monetize costs, benefits and risks (Hahn and Litan, 2005; Viscusi, 2006).

However, when (i) policy options are created merely to support implicitly a predetermined regulatory line; (ii) the ideas put forward by stakeholders during the consultation process are not taken into account; and (iii) useful methods for estimating impacts have not been used, probably due to deficiencies in knowledge and expertise of officials, IAs become merely procedural instruments that do not serve the purpose for which they were instituted. They develop into some sort of justification for regulatory intervention.

Indeed, the performance of IAs at the EU level in most cases did not fulfil the expectations (Löfstedt, 2007). A number of evaluative studies, based on various scorecards, content and function tests, underline that existing IAs do not sufficiently quantify the benefits and costs of future legislation (Vibert, 2004; Torriti, 2007a); do not include sustainable development issues (Kirkpatrick and Franz, 2007; Adelle *et al*., 2006; IEEP, 2004); and do not take into consideration a sufficiently wide range of policy options (Renda, 2006; Cecot *et al*., 2009).

The issue of the variable quality of IAs has been dealt with at the institutional level by introducing an oversight unit within the European Commission.[4] Whilst it might be too early to assess whether the Impact Assessment Board brings about positive effects on the IA system, our review of the IA on the Third Package on energy liberalization takes into account the opinion produced by this new body. It draws on both the academic and policy literature to focus on essential aspects of IAs, such as how policy options are

[4] The Impact Assessment Board, which was established in December 2006, issues opinions on the quality of Impact Assessments conducted by the DGs with the aim of ensuring that they are of high quality and that they examine different policy options. The Impact Assessment Board is composed of five high-level officials, in particular, the Deputy Secretary-General of the Commission, and four Directors coming from DG ENTR, DG ENV, DG EMP and DG ECFIN.

considered; how consultation is taken into account; and what use is made of quantitative economic appraisals. It seeks to examine how these aspects were developed within the IA on the Third Package. While the empirical effort of this article is devoted to analysing data on the IA for the Third Package gathered from official documents and archival records, the broader theoretical endeavour is dedicated to understanding the interaction between 'better regulation' principles and actual policy-making instruments.

II. The Impact Assessment on the Third Legislative Package on the Liberalization of Energy Markets

The package presented by the European Commission's President José Manuel Barroso on 19 September 2007 consists of five legislative proposals.[5] These entail a set of measures aimed at ensuring 'the effective separation between the operation of electricity and gas transmission networks from supply and generation activities' (Commission, 2007b, p. 3). The IA accompanies all five legislative proposals on energy liberalization. The Energy and Transport Directorate General (DG TREN) started working on the IA in September 2006 by assessing the policy options which were on the table at the time. The IA, which was concluded and published in July 2007, is based on both qualitative and quantitative data. The IA presents features which are similar to other EU IAs, particularly with regards to the political controversy around the choice of policy options and the problematic consideration of diverging stakeholder opinions. It is distinctive in the application of a macro-economic model for assessing the impacts of 'ownership unbundling' on economic growth, occupation and inflation. The Impact Assessment Board issued two opinions respectively on the first draft and final version of the IA report carried out by DG TREN. In summary, the Board recommends that the baseline scenario should be streamlined; the effects on investment should be analysed better; that the effects on employment deserve further analysis; and the envisaged changes to the transparency regime should be stated more clearly (Commission, 2007e).

[5] (i) Proposal for a Directive of the European Parliament and the Council Amending Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity; (ii) Proposal for a Directive of the European Parliament and of the Council Amending Directive 2003/55/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in natural gas; (iii) Proposal for a Regulation of the European Parliament and of the Council Establishing an Agency for the Co-operation of Energy Regulators; (iv) Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) No 1228/2003; and (v) Proposal for a Regulation of the European Parliament and of the Council Amending Regulation (EC) No 1775/2005.

III. The Selection of Policy Options in the Third Legislative Package on the Liberalization of Energy Markets

To achieve effective separation, the Commission proposed two main policy options and a set of additional measures. The first policy option is defined as 'ownership unbundling' and was clearly preferred by the Commission (Commission, 2007d). It would prevent companies involved in the transmission of gas and electricity from being involved in energy generation and supply at the same time. Put simply, such companies would be obliged to sell part of their assets. Investors would be able to maintain their participation in the dismantled groups via a system of 'share-splitting' where they are offered two shares for each one that they already own.

The second option involves the introduction of Independent System Operators (ISOs). The Commission had to put forward this second alternative after in July 2007 France, Germany and seven other Member States had sent a letter expressing their opposition to 'ownership unbundling'. Under this second alternative, companies involved in energy production and supply would be allowed to retain their network assets. However, they would not manage commercial and investment decisions, which would be left to an independent company – the ISO – which would be designated by national governments. It is foreseeable – as the Commission warned – that this derogation would come at a higher price in terms of regulatory burdens for two reasons. First, each network owner would have to follow the ISO's decisions to finance investments in transmission capacity. Second, network owners would have to comply with a ten-year network investment plan proposed by the national energy regulator. Moreover, the designation of the ISO by national governments would have to receive prior approval by the Commission in order to guarantee a satisfactory level of independence.

The ISO alternative was generated as a response to the threat of veto posed by the above-mentioned Member States. It is somewhat in contrast with the principles of 'better regulation' mentioned in the previous section for the following reasons.

First, neither is it decided on a cost–benefit basis, nor does it take into account environmental and social impacts. Not only is any type of assessment on the costs, benefits and risks of this policy alternative omitted, but its comparison with other policy options is also based on a rating system which is widely considered by both practitioners and academics as an inadequate substitute for cost–benefit analysis (KCRM, 2007).

Second, evidence on the ISO option is based on case studies on Scotland, Italy, Switzerland and the US. Although these case studies present an interesting tale on positive and negative experiences regarding ISOs in different

countries, they say very little about the costs and benefits associated with this type of legislative framework. A satisfactory estimate of costs, benefits and risks of future policy scenarios is key to understanding whether the future ISOs will have enough capacity to invest in the development of the network. This is important because ISOs will be retained responsible for network planning. At the same time, an ISO without power and independence may be subject to the wrong or no incentives to network expansion (Ranci, 2007a).

Third, the ISO alternative may involve a level of risk different from other unbundling options. Focusing on the legal dimension of risk only, it emerges from the IA that the ISO option would imply a high degree of legal uncertainty, where, for instance, vertically integrated energy companies would have to dispose of some of their assets or hand over the operation of these assets to a third party. Leaving aside security issues, which are not discussed in this article, the ISO policy alternative might not pass a risk–benefit test.

Fourth, it is stated both in the explanatory memorandum and the IA that the ISO alternative may potentially increase the regulatory burden on industries and national regulators. Under this alternative, the number of regulations and regulatory monitoring activities increases, because it must be ensured that the ISO acts independently of the vertically integrated company. Consequently, the number of information obligations that energy companies must supply or have to retain for their records in cases of regulators' inspections increases. The 'better regulation' initiative by the European Commission has in the last two years focused predominantly on cutting red tape (Torriti, 2007b). To serve this purpose, the Standard Cost Model was introduced as a method for measuring the administrative burdens that businesses have to face due to excessive regulation. The ISO alternative increases the administrative burdens on both energy companies and regulators and therefore defies the European Commission's 'better regulation' plans. *Prima facie* one could observe that even the 'third option for effective and efficient unbundling' put forward by a number of Member States, including France and Germany (RPFUE, 2008) would bring about a significant increase in red tape and would not pass a Standard Cost Model test.

Hence, although the proposal and the IA constantly refer to 'better regulation', one of the outputs of the Commission's proposal, namely the policy alternative to establish ISOs, does not draw on 'better regulation' principles. To clarify, this author does not oppose the ISO alternative. It is rather argued that, despite the above-mentioned disadvantages or the lack of information regarding the ISO alternative, the European Commission was forced to include it in the IA and put it forward as a viable measure to overcome the scepticism on full unbundling by some Member States.

IV. Stakeholder Consultation and Qualitative Data

The two main policy options for separating gas and electricity production from supply provision in European energy markets – i.e. 'ownership unbundling' and the introduction of Independent System Operators – received a significant level of attention from a great number of stakeholders. As stated above, the main divergences were between the European Commission and a number of Member States. While the European Commission pushed for the separation of powers in companies that control both energy generation and transmission, some Member States opposed such an initiative, arguing that competition can be achieved through other means. As a result, as mentioned in the introduction, the fundamental disagreement on the concept of 'ownership unbundling' split EU Member States in two blocks. Eight Member States, including Germany and France, explicitly opposed 'ownership unbundling', suggesting instead that national regulators can only request – and not oblige – Transmission System Operators to invest in grid infrastructure upgrades.

Stakeholder consultation took place in early 2007. It involved regulators,[6] Transmission System Operators,[7] associations of electricity and gas companies,[8] independent producers' associations,[9] consumer associations,[10] industrial energy users' associations,[11] traders and new entrants,[12] trade unions[13] and NGOs.[14] Overall, about 150 stakeholders participated in the consultation process (Commission, 2007a).

The IA provides some feedback about the consultation and states that stakeholders were predominantly in favour of the unbundling option. The European Transmission System Operators (ETSO, 2007), for instance, called on Member States to implement the package fully. Moreover, ETSO encouraged the European Commission to put in place the draft guidelines on cross-border trade and congestion management. Eurelectric (2007) argued that it was vital to maintain the momentum and reinforce trust in the liberalization

[6] ERGEG (European Regulators' Group for Electricity and Gas).
[7] ETSO and GTE.
[8] Eurelectric, Eurogas, GEODE (small distribution system operators), GIE (Gas Infrastructure Europe).
[9] EWEA (European Wind Energy Association), EREC (European Renewable Energy Council).
[10] BEUC (European consumers' organization).
[11] IFIEC EUROPE (International Federation of Industrial Energy Consumers), EuroMetaux, EFMA (European Fertilizer Manufacturers Association), Cefic – European Chemical Industry Council, Cimeurope, VEMW Association for Energy, Environment and Water, VIK – *Verband der Industriellen Energie- und Kraftwirtschaft e.V.*, MEUC Limited (Major Energy Users Council), UEAPME (the European Association of craft, small, and medium size enterprises).
[12] EFET – European Federation of Energy Traders, BNE – *Bundesverband Neuer Energieanbieter*.
[13] EPSU – European Federation of Public Service Unions, European Mine, Chemical and Energy Workers Association – EMCEF.
[14] World Wildlife Fund (WWF).

process. The power industry called for the full and effective implementation of the liberalization package by Member States. According to some environmental pressure groups, the liberalization process has thus far worked in favour of these large established utilities as demonstrated by the wave of takeovers that ensued after the opening of the market (Greenpeace, 2005).

This case study represents one typical example of the difficulties incurred by policy-makers in summarizing the vast amount of information generated in public consultations (Meuwese, 2008). Criticisms involved also the empirical justifications for the Third Package.[15]

In addition, IAs do not reflect changes made to the policy proposal throughout the legislative *iter*. For instance, the estimates on costs and benefits are not changed in the light of new figures provided by stakeholders. However, the lack of consensus registered as part of the consultation process is reflected in the political will to change the legislative emphasis of the proposal. For example, the final package, which Parliament was about to approve at the moment this article was written, rejects 'ownership unbundling' and consists of two alternative models: the ISO solution and regulations which guarantee separation of powers. As a result, the agreement that was finally reached in the European Parliament between March and April 2009 envisages changes in the proposal which are not reflected at all in the IA.[16]

V. Quantitative Data and Macroeconomic Impacts

The IA draws on various sources of energy market data. Quantitative data comprise the relationship between ownership of TSOs and reinvested congestion revenue (from the Energy Sector Enquiry); the cumulative and aggregated electricity price changes in the EU (from Eurostat);[17] the total private and public Research and Technology Development in the EU (from JRC); the development of stock prices after unbundling and the development of market shares after unbundling for each country (from own calculations provided by

[15] The IA was criticized by the European Parliament and the German government. Angelika Niebler, MP pointed out that: 'Members saw a lack of empirical data in the Impact Assessment on why privatised and state owned energy companies should be treated in the same way'. The German government made the following statement to the European Council: 'We do not regard the impact assessment as a suitable basis on which to propose that all EU Member States be required to scrap the legal unbundling system just brought in and introduce ownership unbundling of transmission systems'.

[16] Several MEPs voted against the final version of the directive stating that it would not limit energy giants' power, and would not create the basis for genuine competition. Furthermore, Greenpeace activists, small energy suppliers and Green MEPs argued that access to energy grids will remain in incumbents' domain.

[17] It is specified in the IA that the Commission decided to use Eurostat figures rather than those from the Competition Sector Enquiry because the former could create a useful basis for comparisons, being available for several consecutive years.

Datastream). These data are used to describe the status quo of the internal market which renders a legislative intervention at EU level necessary.

In addition to presenting descriptive quantitative data, the EC tried to measure the macroeconomic effects of an increase in total factor productivity in the electricity sector by running simulations based on the QUEST model. The QUEST model is a standard New Keynesian macro-model of the world economy as described by Roeger and 't Veld (2004). Production is modelled with a neo-classical production function using capital and labour as input. This model has been used in the past by the European Commission in a number of policy areas, including transmission mechanisms of specific monetary and fiscal policy shocks, standardized shocks to facilitate comparison among models, as well as productivity shocks and shocks to the reservation wage.

The main assumption of the QUEST model is that regulatory reform in the electricity sector could lead to price reductions of 20 per cent. This assumption is based on the supposition that the EU-15 Member States align their regulatory conditions to those of the 'best practice' countries and that prices adjust accordingly. A price reduction of 20 per cent would be associated with a price decline of 0.6 per cent in the non-tradable sector. The QUEST model translates this reduction in prices into total factor productivity (TFP) and into a mark-up shock. The shocks associated with the 20 per cent price fall in the electricity sector were thus assumed to correspond to a TFP increase of 25 per cent or to a decline in mark-ups by 15 percentage points. The results are potentially negative in terms of employment with the efficiency channel, i.e. with TFP (see Table 1). The effects are even stronger with mark-ups. However, the IA does not present figures related to the mark-ups channel.

The suitability of the QUEST model for this IA is debatable for three reasons. First, the model provides estimates for macroeconomic impacts, but does not infer on the type of findings that the Commission draws as a result of the IA – i.e. positive effects on investment, prices and market concentration. Second, the QUEST model in the past did provide a certain degree of scientific certainty with regard to productivity shocks only, but does not

Table 1: Macroeconomic Impacts (from QUEST Model)

	Increase of TFP by 25%		
	GDP	*Employment*	*Inflation*
After 1 year	0.2	–0.1	–0.05
After 5 years	0.51	–0.01	–0.39
After 10 years	0.51	–0.05	–0.37

Source: Commission (2007a).

Table 2: Macroeconomic Impacts Using Total Factor Productivity Value of 10%

	Increase of TFP by 10%			*GDP with increase of TFP by 25%*
	GDP	*Employment*	*Inflation*	*GDP*
After 1 year	0.01	–0.04	–0.02	0.02
After 5 years	0.2	0	–0.16	0.51
After 10 years	0.2	–0.02	–0.15	0.51

Source: «http://ec.europa.eu/governance/impact/index_en.htm».

describe adequately the type of legislative change involved in vertical unbundling. The latter could be interpreted as a 'shock' only under a gross approximation as to the assumptions. Third, assuming that the TFP increases by 25 per cent and hence GDP goes up by 0.02 after one year, goes beyond the point of the actual objectives of the proposal.

Sensitivity analysis shows that the model would produce much milder GDP effects when starting from a more realistic TFP at 10 per cent (see Table 2). The 10 per cent TFP percentage seems to reflect the most recent projections on oil prices and increases in marginal costs due to large infrastructural grid changes taking place in some European countries such as the UK in the next five to ten years.

Besides the problems associated with the application of the QUEST model on the issue of 'ownership unbundling', other broader problems emerge when using macroeconomic modelling in IAs. IAs are designed to anticipate the economic behaviour of a multiplicity of actors affected by legislative changes. They base their predictions about the distribution of costs and benefits upon the expected individual choices of predetermined samples of the population. Because legislative change affects third parties to a large extent and only to a variable extent the policy-maker, the estimation needs to be based on assumptions about individual responses to change. At the risk of oversimplification, the logical processes that underpin an IA can be divided into two main analytical steps. The first step consists of making assumptions about the rational reaction of one organization – for example, what are the costs to an energy utility due to the Third Package. The second step consists of multiplying this reaction by the total population affected by the legislative change – for example, how many energy utilities in the EU are affected by the Third Package. The use of macroeconomic modelling in this IA, for instance, calls for some reflection about the predominantly microeconomic rationale of IA. Although the quantification of macroeconomic impacts in IAs is faced with several constrictions and limits, it has the potential to overcome the excessive focus on microeconomics of IA. The technique of multiplying the

costs and benefits experienced by an individual firm by the total population of firms, that is, using microeconomic instruments for macroeconomic purposes, has the merit of helping to provide actual figures for the impacts of legislative changes. This may produce a more rational approach to making decisions, as well as simplify the multiple factors that go into a legislative decision.

Conclusions: Evidence-Based Policy-Making or Policy-Based Evidence-Making?

The article depicts some of the issues that the European Commission typically faces when carrying out IAs. Often the selection of policy options and the inclusion of stakeholder opinions mirror the political context, regardless of the estimated costs and benefits in the IA report (Baldwin, 2005). In the case examined in this article, the inclusion of the second-best ISO policy option reflects the positions of some stakeholders' opinions and disregards the available evidence. The way the Third Package was concluded in Parliament shows that the adopted ISO solution: (i) is not based on an orthodox cost–benefit analysis; (ii) increases legal uncertainty and is unlikely to pass a risk–benefit test; (iii) is against the general EU 'better regulation' trend to reduce administrative burdens; (iv) does not follow the opinion of the majority of stakeholders; and (v) its only evidence is based on case studies at national and sub-national levels.

One element that distinguishes this case from other IAs is the analytical attempt to quantify macroeconomic impacts through modelling economic growth, unemployment rates and inflation. Whilst the microeconomic rationale seems to prevail in IAs, the effort to include macroeconomic modelling is encouraging. However, in this case the use of the QUEST model to assess the macroeconomic impacts of 'ownership unbundling' is problematic for at least three reasons. First, the model does not infer on the type of findings that the Commission draws as a result of the IA, i.e. positive effects on investment, prices and market concentration. Second, the model does not describe adequately the type of legislative change involved in vertical unbundling. Third, the relation between total factor productivity and macro-variables, such as GDP, inflation and employment rate, transcends the objectives of the proposal.

As a result of the exogenous constrictions that the Commission had to face in the phase of the proposal for the legislative package on the liberalization of energy markets, not only is the IA limited in terms of analytical thoroughness, it even diverges from the content of other official documents (Commission, 2007b, 2007c). It was observed that, on the one hand, the macroeconomic

model used in the IA does not address the objectives of the proposal and, on the other hand, the report is structured around the 'ownership unbundling' option, not the ISO alternative.

IAs can only play a key role in decision-making if they are carried out to a high technical standard. There seem to be constraints associated with the way IAs presently interact with policy-making procedures (Baldwin, 2007). These constraints do not favour technically impressive assessments. It has been observed above, for instance, that the time gaps between the assessment phase and the crucial steps of the procedure of the policy proposal did affect the precision and significance of the IA. For the same reason, the ISO option, which was ultimately crucial in the final version of the Third Package agreed in Parliament, does not present the most favourable cost/benefit ratio; does not reflect the preferences of the majority of interested actors; and does not reduce – if anything, it increases – the amount of regulation in the energy sector. Hence, the findings of this article agree with the literature which describes selection of policy options, inclusion of stakeholder opinions and analysis of the impacts as the pillars of the IA system.

It was observed that the lack of an exhaustive analysis on the benefits and costs may render the assessment ancillary – to use a euphemism – to the content of the directive. When the costs and benefits are not monetized, the perceived 'softness' of the IA may reduce its influence on the policy or legislative process. At the UK level, for instance, in 2006 the National Audit Office stated that weaknesses in assessments meant that Regulatory Impact Assessments are only occasionally used to challenge the need for regulation and influence policy decisions (NAO, 2006).

A real problem emerges from the tensions between the policy-making process and IA principles. Within the IA system policy-makers are supposed to consider and compare the array of regulatory routes to a policy objective, but in practice a proposal may be the product of a process of negotiation between a widespread range of stakeholders. This can arise when compromises and concessions have been made between different interests and, as such, there may be only two feasible options (e.g. 'ownership unbundling' and ISOs). At best, the IA system fits in EU policy-making as a valid decision-making aid. At worst, it may prove ineffective in providing empirical grounds for policy-making, selecting an appropriate spectrum of policy options and in considering stakeholder opinions. The findings of this article seem to converge towards the latter view.

The findings of this article should not be considered as a negative judgement of the IA system as a whole. Although individual EU IA reports could be improved, this author believes that providing empirical evidence about policy interventions in crucial policy areas, such as the liberalization of the

energy market, is vital for an informed, open and transparent policy-making process.

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