5. Principles and methods for increasing efficiency in public law

In modern public law, efficiency takes the form of three *general principles* (section 1): subsidiarity, proportionality and sustainability. These principles allow us to perform an 'efficiency test' on non-consensual institutions. Economic tools, such as cost–benefit analysis, are also required for this test (section 2). All the above serve the central mission of public law: to ensure legal certainty, the most important public good for both the Agora and the Demos (section 3).

1. THE THREE PRINCIPLES OF EFFICIENCY IN PUBLIC LAW

Why should Demos intervene? This dilemma can be broken down into three sub-questions: *whether*, *to what extent* and *in what way* is such intervention needed? According to economic theory, the answer lies in the notion of efficiency. Public action is justified only *if* it is efficient, *up to the point* that it is efficient and *in the way* that proves the most efficient. These aspects of efficiency correspond to three general principles: subsidiarity (section 1.1), proportionality (section 1.2) and sustainability (section 1.3).

Public law is familiar with those principles. Still, their law and economics approach involves new tools and techniques derived from economic science. Moreover, it widens their scope. They are not only good in resolving judicial disputes but may be applied in a much broader context: for designing public policies, norms, bodies and procedures of all kinds. They acquire universal significance for public law. Subsidiarity, proportionality and sustainability becomes the legal equivalent of effectiveness and efficiency.[1]

[1] *Vogenauer/Weatherill* 2017; *Zerbe* 2014. Another notion related to effectiveness and efficiency is *reasonableness*. Courts use it when they wish to exercise a less activist judicial review than the proportionality test. Reasonableness is synonymous to the *minimum effectiveness* that a public decision should have; conversely, the 'unreasonableness test' is a way to ascertain judicially whether a choice is *evidently effective* or not. For what reasonableness is about, see the essays in *Bongiovanni et al.* 2009.

This trend is particularly evident in EU law.[2] The Maastricht Treaty connected the principles of subsidiarity and proportionality with economic instruments and processes[3] for assessing both the legality and feasibility of European policies.

1.1 Subsidiarity

Subsidiarity allocates mandates among several levels of governance.[4] According to this principle, a key one for EU law, it is better to make decisions locally rather than remotely – as close as possible to the citizens concerned. Higher levels of governance (central government, EU institutions) should intervene only if two conditions are met: (a) lower institutions are unable to deal with an issue efficiently; (b) the issue can be better regulated in a broader context.[5]

For economic analysis, subsidiarity is a tool for making optimal decisions. When choices are made closer to the citizens and with their consent, transaction costs are reduced (information deficit and implementation costs). Furthermore, lower public institutions (local authorities, EU member states) compete between each other to find the best solution on a problem: the ideal waste management plan or the most successful policy on food safety. Such competition helps improve public choices: the optimal ones will finally prevail. However, the opposite is also possible. Disparities at the lower level can have side effects, as they may prevent optimal, harmonised solutions or generate high compliance costs for those that are forced to cope with different regulatory regimes. Furthermore, issues that have a more global impact, such

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[2] In its early stages of European integration, the CJEU evoked effectiveness as a legal notion to ensure crucial aspects of the European *acquis*, such as the direct effect of Directives and member states' civil liability (CJEU judgments in Cases 6/64 *Costa v E.N.E.L.* (1964); 106/77 *Simmenthal* (1978); C-48/93 *Factortame* (1996)). For the notion of *effet utile*, see *Da Cruz Vilaça* 2013 and the Opinion of Advocate General Poiares Maduro of 9 July 2009, in Case C-118/08, *Transportes Urbanos y Servicios Generales SAL* (2010), para 1: 'It is a requirement of the principle of effectiveness that national procedural rules ensure effective protection of the rights conferred by Community law.'

[3] Protocol no. 2 of the Treaty of Lisbon provides that 'each draft legislative plan must include a documented report on the basis of which it can be judged whether the principles of subsidiarity and proportionality are met'.

[4] *Aroney* 2014; *Bröhmer* 2014; *Estella* 2002; *Evans*/*Zimmerman* 2014; *González* 1995; *Azoulai* 2014; *Groussot/Bogojevic* 2014; *Granat* 2018.

[5] According to article 5.3 TFEU, which safeguards the principle of subsidiarity, 'the Union intervenes only if and to the extent that the objectives of an action cannot be sufficiently achieved by the Member States, but can be better achieved at Union level by reason of the scale and effects of the proposed action'.

as a clean environment, data protection or money laundering, are more suited to consideration at the highest level. A common approach – European or international – leads to better solutions and to economies of scale.[6]

Subsidiarity reflects the optimal vertical relationship within the pyramid of public institutions. In EU law, its application requires a two-stage comparative efficiency test.[7] First, the 'sufficiency' of the domestic legal order is assessed: can an objective be met by national rules? The second stage assesses the efficiency of potential EU intervention: if national action proves to be inefficient, would the Union achieve better results? The expected outcome of European action is compared to that of national authorities.

Subsidiarity is not only useful in distributing roles among public institutions. It is equally suitable for doing the same between the Demos and the Agora. It answers a fundamental question: does private initiative cover a need sufficiently, or is public intervention required to satisfy it? This principle allows us to test 'whether' non-consensual action is needed. It limits the latter only to those cases where unregulated private behaviour proves less efficient.

Subsidiarity guarantees rational choice and liberalism. It deprives public intervention of its self-evident character. It helps to separate and define the respective fields of private and public action. This principle seems to be a normative variation of the Coase theorem: 'irrespective of which party, private individuals or a public authority, initially exercises an activity, the latter must ultimately be undertaken by whoever can perform it more efficiently'. It allows the allocation of mandates correctly between the Agora and the Demos, by assessing their comparative efficiency. It contributes to the resolution of thorny issues in public law. Should a firm or an economic sector be nationalised or privatised? What is the optimum blend of public regulation and free market? Confronted with such dilemmas, old public law did not offer any convincing response. It considered those issues to be mainly political; the legislator could rely on its democratic legitimacy to handle them according to the majority's wishes. In the light of the subsidiarity principle, legislative discretion is not unlimited. It has to be substantiated by efficiency tests. Moreover, it cannot ignore a fundamental rule of economic theory. The Agora is, in principle, more efficient for allocating resources; the Demos shall intervene only if it can do better.

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[6] *Frey/Eichenberger* 1996; *Van Den Bergh* 1996; *Bednar et al.* 1996; *Carbonara et al.* 2012; *Levy* 2017.

[7] *Portuese* 2014.

1.2 Proportionality

The principle of proportionality[8] follows the subsidiarity test. If public intervention is inevitable, up to which point must it extend? For economic analysis, intervention is desirable up to the point that the following three conditions are met: first, that it is appropriate for pursuing a welfare goal; second, that it is necessary for achieving that goal; third, that it involves the smallest sacrifice of other goods, public or private, by producing the lowest opportunity costs. Suitability (*Geeignetheit*), necessity (*Erforderlichkeit*) and *stricto sensu* proportionality (*Verhältnismäßigkeit*) are the three aspects of this principle, also according to legal theory.[9] The concept of proportionality, more than any other, introduced efficiency to continental public law. It is not just a coincidence that legal systems more familiar with that principle (Germany, the EU) were able to make their public action more efficient, compared to others (France, Greece). Americans do not need proportionality as much as we Europeans; instead of referring to this concept, they directly use cost–benefit analysis tools in their legal reasoning.[10]

The three criteria of proportionality correspond to three economic tests for measuring the efficiency of public choices.[11] Suitability is equivalent to an *in abstracto* effectiveness test. Is the public decision under review capable of attaining the intended objective? Necessity goes one step further: that decision must also be *in concreto* efficient. Is there another measure that serves the same purpose at a lower cost? If yes, then the reviewed option is not necessary. This last test evaluates the comparative efficiency of the proposed solution. Its benefits are compared with the costs for other interests which will be affected if this solution is adopted. The latter meets the third criterion only if its marginal benefits exceed the marginal costs it generates. If so, the specific public choice is Kaldor–Hicks efficient. Its pros are higher than its cons, so that those benefiting from it can compensate those who are harmed by it.[12]

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[8] *Bongiovanni*/*Valentini* 2009; *Hulsroj* 2013; *Klatt*/*Meister* 2012; *Rose-Ackerman* 2013; *Stone Sweet*/*Mathews* 2008, 2011; *Webber* 2010; *Vogenauer/Weatherill* 2017; *Kosta* 2019.

[9] This general principle was introduced in European public law by the supreme administrative Court of Prussia (*Kreuzberg* 1882, PrOVG 9, 353). Then it was established in German law and in the law of the European Economic Community (Case 11/70, *Internationale Handelsgesellschaft*, 1970), and latter transplanted into other legal orders (France was one of the last: CE Ass., 19.4.1991, *Mme Babas*, *M. Belgacem*).

[10] *Sullivan*/*Frase* 2008; *Möller* 2017.

[11] *Portuese* 2014.300.

[12] See Chapter 2, section 2.2.2.

As Alexy notes, proportionality is a method for the optimisation of public choices,[13] closely linked to cost–benefit analysis. Its connection with economic theory is obvious even when this principle is used before the courts. Let's take judgment *Ville nouvelle Est* (1971) of the French *Conseil d'État* as an example. This judgment was rendered long before the term *proportionnalité* was introduced in French administrative law. In order to assess the legality of public projects that entail compulsory expropriation (construction of new motorways or sewage plants), the *Conseil* referred to their costs and benefits (*bilan coût-avantages*). Such projects are compatible with law if their various costs (budgetary, social, ecological, restriction of ownership rights) are not 'excessive' (*excessifs*) compared to their benefits.[14] In the same year, the American Supreme Court held that a highway cannot go through a protected area except if there were no other 'feasible and judicious alternative' (*Citizens to Preserve Overton Park v Volpe*).[15] To put it simply, both courts required the public authorities to show the comparative efficiency of their choices.[16] Proportionality would be useless without the appropriate economic tools: scientific impact assessment and cost–benefit analysis. For EU law this is more than obvious. In judgment T-13/99, *Pfizer Animal Health*,[17] concerning a regulation prohibiting an antibiotic, the European judges stated that 'the cost/benefit analysis is a particular expression of the principle of proportionality'.[18]

Economic analysis of public law confers a significant role upon proportionality. It is not just a principle used to safeguard fundamental rights before the courts; it is also a mechanism for reaching better public decisions. It allows for the 'fine tuning' of public intervention in all areas: production and interpretation of legal norms, institutional design, optimisation of decision-making processes. The scope of the proportionality test exceeds adjudication, which

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[13] *Alexy* 2000, 2002.

[14] CE 28.3.1971, *Ministre de l'équipement et du logement contre Fédération de défense des personnes concernées par le projet actuellement dénommé 'Ville nouvelle Est'*.

[15] SC, 401 *U.S.* 402 (1971). *Kelso* 2013; *Portuese* 2014.182; *Sullivan/Frase* 2008.

[16] The Greek Council of State applied a similar rationale for reviewing the legality of an environmental permit to a gold mine: CoS (Plenary Session) 613/2002, 1492/2013.

[17] Case T-13/99, *Pfizer Animal Health* (2002).

[18] *Ibid*, para 411. The rationale of the Court of First Instance is based on Protocol 2, of the Treaty of Lisbon, according to which, when applying the principle of proportionality, '(D)raft legislative acts shall take account of the need for any burden, whether financial or administrative, falling upon the Union, national governments, regional or local authorities, economic operators and citizens, to be minimised and commensurate with the objective to be achieved'. For cost–benefit analysis in legal decision-making, see *Zerbe* 2017.

has been its traditional field. Apart from protecting private rights in particular cases, it is even more important in rulemaking for improving public decisions with a broader regulatory impact. Assessing proportionality in the rulemaking process leads to a systemic, optimum combination of all aspects, often contradictory, of individual and collective welfare. It presents the additional advantage of warranting the efficiency of public choices before or at the moment that they are taken – not afterwards, when (and if) a private individual judicially challenges them.

In the courtroom, proportionality – as revisited by economic analysis – allows judges to improve their control over public regulation, to better review public policies, without violating the separation of powers. This would be the case if they replaced the choices made by the legislator with their own vision on the matter. Judges may insist on the technical, more formalistic aspects of proportionality, to examine whether the costs and the benefits of the challenged public decision (a law, a regulatory act, an individual administrative act) were duly taken into consideration – to question whether this decision was accompanied by the necessary impact assessment studies, which justify the regulatory options and prove that the Demos does not disproportionately intervene in the affairs of the Agora. By doing so, instead of reviewing thoroughly the merits of the case, the courts strengthen their position. They may invalidate all kinds of public decisions without being reproached for tampering with policy choices.[19]

Finally, by invoking proportionality, judges can impose on the Demos a broader *duty for consistency and coherent action*. The CJEU has already done so in judgments C-42/07 and C-186/11[20] regarding the compatibility of domestic gambling regimes with European law. National legislation restricting the free movement of gambling services in the name of the general interest is *'suitable'* for serving its objectives *'only if it does in fact aim at attaining them in a consistent and systematic manner'*.[21] The 'consistency test' strengthens the first sub-criterion of proportionality (suitability). It converts this principle into a systemic obligation, leading to an overall evaluation of public action.

1.3 Sustainability

Sustainability[22] is a term that we encounter with increasing frequency. In the 2017 Rome Declaration, a two-page document celebrating the 60th

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[19] Further analysis in Chapter 9, section 2.2. *Elliott* 2010; *Arancibia* 2010.

[20] Cases C-42/07, *Liga Portuguesa de Futebol Profissional* and *Bwin International* (2009), paras 59 to 61; C-186/11, *Stanleybet International* etc. (2013), paras 24 and 27.

[21] *Ibid*.

[22] See the collected essays in *Keiner* 2006; *Mathis* 2012; *Bandi et al.* 2014; *Walliman* 2013; *Mancebo/Sachs* 2015.

anniversary of the EU, it is used as many as four times: the Union aims at a 'prosperous and sustainable' Europe; at 'promoting sustained and sustainable growth', 'based on sustainable enlargement' to preserve its social profile; and at advancing a 'responsible and sustainable migration policy'.[23] Though this notion first appeared in an ecological context, its scope has become broader. Ensuring sustainability is a major advantage of public action over the 'invisible hand' of the Agora.[24] The Demos exists for warranting fair and secure access to happiness at all time. Isn't that what sustainability is about?

Sustainability is systemic by nature. A public policy cannot be partially or provisionally sustainable. It must achieve the long-term, ideal satisfaction of all needs. *Sustainability is both global and intertemporal*, as stated in the Brundtland report, which includes the United Nations' common understanding of sustainable growth (1987).[25] Such growth shall satisfy the needs – from both an economic, social and environmental standpoint – of the current generation without preventing future generations from achieving equal satisfaction of their preferences. The same definition applies to all various sectors of public action: a social security fund is sustainable if contributions paid today can provide sufficiently for those insured in the future.

Economists have been dealing with sustainability issues since the 1930s.[26] Is it possible to guarantee consistent growth across time? The optimistic, neoclassical theory after the Second World War provides an affirmative reply to this question. As long as population is growing, wealth is increasing and technology is advancing, the economy will continue to boom.[27] This approach, however, failed to take into account the constant decrease in natural resources. In the 1970s, a group of scientists (known as the 'Club of Rome') shed light on *The Limits to Growth*.[28] According to them, the exhaustion of non-renewable resources could lead to the collapse of the global economy within a few decades. To ensure social welfare, growth should not be constant and ever-expanding. It must be sustainable – to guarantee (at least) the same level of *per capita* goods across time, despite the gradual reduction of natural capital.

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[23] Primary European law refers also to 'sustainable growth' (article 11 TFEU), the 'economic sustainability' of trans-European networks (article 171 TFEU) and the 'long-term sustainability of public finances' (Statement 30, for article 126 TFEU).

[24] See Chapter 4, section 1.2.

[25] And in Agenda 21 of the Rio Earth Summit (1992) on climate change; *Endress/Radke* 2012.140. For an economic analysis of the climate change, *Helm/Hepburn* 2011; *Mathis* 2012.

[26] *Hotelling* 1931.

[27] *Solow* 1956; *Swan* 1956; *Solow* 1993; *Acemoglu* 2009.

[28] *Meadows et al.* 1972; *Meadows et al.* 2006; *Arrow/Fisher* 1974; *Bishop* 1978.

Sustainability is a crucial factor in the discussion on attaining 'fair' welfare for all. The duty not to ignore future generations lends an intertemporal dimension to the concept of social fairness.[29] Those at risk of being worse off in the future need to be protected as well. The principle of sustainability helps treat a serious principal-agent problem. When the current generation determines the rates and modes of growth, it is not acting only on its own behalf; it represents the interests of future children. Like all agents, it has the tendency to downgrade the interests of future generations.[30] Sustainability provides an ideal, *Pareto*-optimum solution to this problem. For everything our society consumes, it must 'preventively compensate' future generations by ensuring equal prospects of welfare for them. Then and only then is growth sustainable.

Norway is an excellent example. After discovering oil deposits in 1965, the country set up a special fund (the *Oljefondet*) for investing part of the proceeds. The fund is to function as a financial 'cushion' for future generations once these natural resources have diminished. In September 2017, it held more than a trillion dollars, as a welfare guarantee for those not yet born.

Even if it is quite simple to conceptualise sustainability, its application proves to be extremely hard (unless one has Norway's fortune and maturity). It is a *probatio diabolica*: something that is like hell to demonstrate. How to determine whether a choice is sustainable or not? The CJEU and several legal orders avoid giving clear answers.[31] The difficulty lies in the tools and techniques to be used for calculating the sustainability of public decisions. This examination is much more complex than those regarding subsidiarity and proportionality. The 'sustainability test' is a very ambitious one; it is a 'mega-equation', including all kinds of parameters for assessing, even for the future, the various aspects of welfare potentially affected by the public decision under review. It aims at a systemic success: an optimal combination for any form of social and economic regulation. But this is not an easy task. Just think for a moment of the consequences of the European energy policy for you and your children over the next 50 years. It is almost impossible to estimate if this policy is 'sustainable' or not.

For economists, nothing is impossible. In economic theory, this enigma is linked to a broader and rather fashionable discussion. Which cost–benefit analysis tools are appropriate to evaluate the sustainability of public decisions? Several questions arise, as we shall see in the pages to come. For example, is

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[29] See Chapter 2, section 2.2.3.

[30] *Mathis* 2012; *Hartwick* 1977; *Asheim* 2010; *Gerapetritis* 2019.

[31] *Lee* 2014.63. Judges often hide behind a tautology. An activity with environmental impacts is considered 'sustainable' if it abides by the various environmental law requirements. In other words, sustainability is identified with environmental legality, which is not necessarily the same thing.

it possible to substitute the irreversible loss of non-renewable resources with something else? To accept a trade-off between the exhaustion of oil deposits or virgin forests on the one hand, and scientific innovations on the other, that will make it possible for future generations to have an equally good life on an Earth with less petrol and green areas? How can we calculate such a trade-off? Which aspects should be prioritised?[32] How are we to assess risk under conditions of extreme uncertainty?

In European law, the latter dilemma is dealt with via the *precautionary principle* (article 191.2 TFEU).[33] An activity may be restricted with the aim of protecting the environment and human health, even in the absence of conclusive evidence as to its potential harm; in a framework of scientific uncertainty, a plausible risk is sufficient for public intervention. This legal concept highlights the close connection between sustainability and impact assessment technics. The European Commission Communication on the precautionary principle[34] leaves no room for misinterpretation. It refers to 'the potential long-term impact' of an activity and to the need for public action 'to limit or eliminate a risk whose effects will not surface until ten or twenty years later or will affect future generations'. To apply this principle, an assessment is made of 'the advantages and consequences entailed by (public) action or lack of action'. This assessment 'cannot be limited to an economic analysis of costs and benefits only'; it must 'have a broader scope, incorporating non-economic criteria'.

In other words, the devil lies in the details: not in the legal concepts of sustainability or precaution as such, but in the (economic) tools for applying them.

2. SPEAKING OF THE DEVIL: ECONOMIC INSTRUMENTS FOR MEASURING EFFICIENCY

The three principles of efficiency share a common element: they rely on similar tools for their implementation, which are extremely important for modern public law. In many cases, the debate on whether public intervention

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[32] The EU uses more than 130 'sustainable development indicators' (SDIs) to assess its policies. These indicators are divided into categories, such as 'socioeconomic development', 'sustainable consumption and production', 'social integration', 'sustainable transport', 'climate change and energy', 'public health', 'good governance', and so on. See *Sustainable Development in the EU, 2015 monitoring report of the EU Sustainable Development Strategy*, Eurostat, 2015, available at: https://ec.europa.eu/eurostat/documents/%203217494/6975281/KS-GT-15-001-EN-N.pdf.

[33] *Munthe* 2011; *Rose-Ackerman* 2013 and the collected essays in *Wiener et al.* 2011.

[34] Communication from the Commission on the precautionary principle, COM 2000(1) (final).

is compatible with the principles of subsidiarity, proportionality and sustainability raises another question. How can we measure the pros and cons of that intervention? This question is controversial (section 2.1) on both sides of the Atlantic (section 2.2).

2.1 The Many Faces of Impact Assessment

2.1.1 Impact assessment, cost–benefit analysis, commensurability

Impact assessment reveals the effectiveness and efficiency of public decisions. It is often based on methods of cost–benefit analysis (CBA).[35] In the US, CBA is mandatory for regulatory intervention. For Americans, the 'administrative/regulatory State' has become a 'cost–benefit State'.[36]

Nevertheless, impact assessment and cost–benefit analysis are not exactly the same. The former examines the consequences of a decision but is more open regarding the criteria to be applied. On the contrary, CBA uses a stricter economic methodology. The various costs and benefits are expressed in numbers and their comparison leads to a positive or negative result. CBA records the advantages and disadvantages of public action so that they can be measured comparatively. Discovering the commensurability of the figures is, therefore, necessary. In economic theory, commensurability is achieved by using a common measuring system; by applying monetary 'price' to every good, value and aspect of life (even to those that are not for sale). CBA is useful for presenting the impact of a regulatory option in comparable terms: the costs and the benefits of a new policy for car safety, renewable energy or internal security are expressed in dollars or euros. This presentation supposedly grants to the decision-maker or to the institution reviewing that decision a better view of its efficiency, by converting everything into money. 'Hard' CBA is identified with a utilitarian, purely monetarised, economically efficient assessment of costs and benefits.

Hard CBA has a significant advantage. It is the only method that allows for absolute comparisons to be made as to the pros and cons of a public measure. However, a necessary precondition for this monetarised analysis to be precise and not misleading is the commensurability of the assessed parameters. Insofar

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[35] See the very illuminating analysis in *Arcuri* 2012 about the issues raised by impact assessment in the context of social regulation. For more on impact assessment and cost–benefit analysis, see *Ackerman et al.* 2005; *Adler* 2011; *Adler*/*Posner* 2001; *Arrow et al.* 1996; *Hammer* 2012; *Mathis* 2012; *Posner* 2001; *Revesz* 1999; *Revesz*/*Livermore* 2008; *Rose-Ackerman* 2011, 2013; *Sunstein* 1996; 2001, 2002a, 2005a, 2011a, 2014; *Viscusi*/*Aldy* 2003; *Williams* 2001; *Zerbe* 2017.

[36] *Sunstein* 1996, 2002a.

as this is impossible, impact assessment cannot be exhausted in a hard CBA. This would produce erroneous choices.

In order to avoid that trap, economic theory has elaborated additional, less absolute methods for impact assessment – we may call them 'soft' cost–benefit analysis. Soft CBA does not necessarily attribute monetary value to all items under assessment. For example, when applying cost-effectiveness and cost–utility analysis, the various options for attaining a specific result are compared as to their financial costs, but without measuring their benefits in monetary terms (benefits in saving human lives through public policies for reducing child mortality or medical errors). The reverse applies to environmental impact assessment: economic figures are used not to consider the environmental cost by exercising an activity but its economic benefits (a new industrial complex or airport). Risk–benefit analysis is required if the effects are so uncertain that they cannot be safely measured (the impact of a new medicine on human health). This method focuses on the risk ratio compared to the expected advantages.

In summary, impact assessment is imperative for evaluating public action. It makes it possible to examine whether an objective is attainable and analyse other alternatives for achieving it. However, the question whether this assessment shall rely on a hard CBA and to what extent is not an easy one. It is neither 'innocent' nor without risks. It encompasses more fundamental dilemmas regarding the definition of social welfare and the role of public institutions in pursuing it.

2.1.2 Controversies over cost–benefit analysis

Hard CBA raises various issues. First, matters of principle. Is it acceptable to assess all aspects of life in terms of money? Second, a series of practical questions, such as: which are the correct methods for measuring specific goods under conditions of uncertainty? Ultimately, regarding its objectivity. Could it be a Trojan horse for promoting economic priorities rather than social regulation policies?

Those who oppose CBA consider it impossible to express in dollars or euros non-marketable goods such as human life or the protection of biodiversity. No price tag can be put on these goods. It is like 'pricing the priceless', as with Judas' 30 pieces of silver.[37] Treating public and common goods as if they were consumer products – a process called *commodification* – is methodologically unsound. It places things that are substantially different on an equal footing.[38]

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[37] *Arcuri* 2012; *Hammer* 2012.

[38] In a study published in 2010, Amartya Sen, Joseph Stiglitz and Jean-Paul Fitoussi showed how complex it is to evaluate 'quality of life'. If this could be assessed

Although this criticism is not unfounded, most academics – including those who are 'pro-regulation' – do not reject CBA completely.

Economists use CBA even when they must set a price for human life, the most priceless of all goods. Economic theory has come up with an original method for that purpose, named 'value of statistical life' (VSL).[39] VSL is based on the extra pay a worker would ask for undertaking a dangerous activity (to place explosives, for example). The 'value' of human life is calculated by multiplying this additional fee with the rate of the increased risk. If this amount is equal to $500 for a higher mortality risk of 1/10,000, VSL is estimated at 5m dollars ($500 x 10,000).[40]

The value of environmental goods relies on 'hedonistic' methods;[41] on the choices people make to enjoy such goods: the price they would pay for visiting a region with a well-preserved landscape ('travel cost methods'); the price difference between two identical homes located in different environmental settings (the one close to a forest, the other near a landfill).[42] These instruments are useful but imperfect. They are based on choices made subjectively and in conditions of high complexity and information asymmetry.

The difficulty in evaluating efficiency is aggravated when the effects of a public policy will only be seen in the future: a new traffic regulation that will reduce accidents in ten years; an environmental policy that is expected to reverse global warming by the end of this century. In those cases, the question arises whether a *discount rate* should be applied for measuring the benefits. In principle, any amount invested today is expected to yield an annual return; inversely, a future benefit must be depreciated by using a discount rate to render it comparable with current prices. For instance, €100,000 at a 5 per cent rate will give €162,000 in ten years. Following the same line of thinking, a public policy that costs €100,000 today should be subject to a similar rate.

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solely by indicators that measure wealth, those countries with the highest GDP would be inhabited by the happiest people (which is not the case, of course). *Commission on the Measurement of Economic Performance and Social Progress* (*CMEPSP*). See also *Ackerman et al.* 2005.

39 *Viscusi/Aldy* 2003; *Viscusi* 2000; *Posner/Sunstein* 2005; *Graham* 2008.

40 VSL has evident drawbacks. It relies on the price for which a poor worker would risk losing their life. This value must be revised upward if it is to calculate non-voluntary harms. No one would consent to lose his/her life due to a road accident or an environmental disaster.

41 On the broader use of hedonic analysis for calculating damages, *Hartman/Doane* 1987.

42 Surveys are also conducted in order to identify people's preferences as to specific environmental goods or services ('contingent valuation method'): how much they would pay to clean up the river Danube or to ensure the survival of polar bears. *Arcuri* 2012.

It must yield benefits equal to at least €162,000 in ten years or €265,000 in 20 years. If not, it is not 'efficient' enough to pass the CBA test. Discount rate is useful, as it calculates costs and benefits generated at different times. However, the higher the rate, the more difficult it will be to promote prospective public policies in the name of sustainability.[43] The benefit for future generations will be correspondingly downgraded.[44]

Future projections raise questions of a non-monetary nature as well. Life is uncertain; many of its risks cannot be fully assessed in advance. For that reason, it is impossible exactly to scientifically describe the advantages of public decisions dealing with these risks.[45] If science cannot clearly evaluate detriments to health caused by a new chemical substance, it is impossible to estimate via a hard CBA the benefits from prohibiting it (the lives to be saved); it is also not safe to compare those advantages with the incurred costs (industry and consumer losses). The EU formulated the precautionary principle to avoid this trap – to allow for costly preventive measures, even where risks cannot be scientifically ascertained.

But the doubts regarding CBA remain. This method seems more appropriate for assessing the economic burdens of a public policy rather than its non-economic benefits. Since they are better described, those costs may lead the decision-maker or the reviewing courts to underestimate the importance of social priorities. This happened in two cases brought before US courts in the 1980s,[46] concerning the mandatory use of airbags in cars and the reduction of benzene levels at workplaces. The cost of these policies was easily calculated in monetary terms (mainly, higher production costs for the concerned industry); by contrast, it was not obvious how to evaluate improved road safety and health conditions in millions of dollars.

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[43] Let us take as an example a hypothetical European policy for reducing air pollution over the next 20 years. Let's assume that in the year 2040 the benefit from this policy will amount to 25 bn euro (though there is uncertainty about how much clean air will be 'worth' for those living then, or the 'benefit' from lowering mortality due to pollution, and so on). If the discount rate is set at 8 per cent and that policy encumbers the current budget by €10bn, then it will be rejected (it would need a benefit of €36.6 bn to pass the test). If the discount rate is set at a value less than 5 per cent, the policy will pass the CBA test. If the benefits are moved to 50 years from today – as is the case for policies to counter global warming – even a discount rate of 3 per cent would render 'inefficient' the spending of €10bn.

[44] However, a zero-discount rate would also be economically erroneous. Even those in favour of social and environmental policies do not plead for zero discount rates. *Rose-Ackerman* 2011.349; *Sunstein/Rowell* 2007; *Weisbach/Sunstein* 2009.

[45] *Black* 2010.

[46] *Motor Vehicle Manufacturers Association v State Farm Ins.*, 463 *U.S.* 29 (1983) and *Industrial Union Department v American Petroleum Institute* (*The Benzene Case*), 448 *U.S.* 607 (1980).

All these controversies make CBA look suspicious. Instead of an objective scientific method, could it be a marked deck of cards? A pseudo-technocratic tool to advance wealth-maximising choices against social justice objectives?[47] This accusation has to be taken seriously. On the American side of the Atlantic, hard CBA was indeed invoked to justify excessive deregulation. Policies undoubtedly beneficial and self-evident in Europe – for example, the obligation to sell unleaded gasoline – may have not 'passed' the initial CBA test.[48] Moreover, a strictly monetarised assessment may set aside the protection of minorities. Why invest great amounts of public money in finding a cure for a very rare disease and save only a handful of people from certain death worldwide? Would perhaps these funds be more 'efficient' if invested in countering more widespread health problems?[49]

Lastly, a deeper question arises, this time regarding the democratic process itself.[50] Impact assessment seems to lend more importance to the experts as against the layman. A scientist seems more suited to deciding whether nuclear energy is 'safe enough' to produce electricity. Yet, substituting a council of experts for the average man – the *bonus pater familias* of Roman law – entails a greater risk: to betray in the name of expertise the core of democratic liberalism, the freedom of ordinary people to choose how to live their lives. On the other hand, setting aside the experts in the name of the people's 'right' to have their own view on everything is also inefficient and dangerous.[51]

2.2 Impact Assessment and Cost–Benefit Analysis on Either Side of the Atlantic

The above concerns do not aim at rejecting impact assessment and CBA but at encouraging their use with moderation – as scientific support for reaching better choices rather than as means to substitute democratic procedures. Both the USA (section 2.2.1) and the EU (section 2.2.2) are looking for this balance, in order to incorporate into their decision-making process the most accurate tools.

2.2.1 USA

In the USA, CBA dates back to the 1930s and the New Deal. Its use became more widespread in 1981 under President Reagan. All regulations with

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47 *Shapiro* is particularly critical: *Shapiro/Steinzor* 2008; *Shapiro/Tomain* 2014. See also *Adler* 2011 and *Bronsteen et al.* 2013.

48 *Ackerman et al.* 2005; *Arcuri* 2012.

49 *Hahn/Tetlock* 2008.

50 *Fisher* 2017a.

51 *Nichols* 2017.

expected impact exceeding $100m per year are accompanied by a regulatory impact analysis (RIA). The Office of Information and Regulatory Affairs (OIRA) evaluates them and has the power to suspend policies lacking the necessary studies. In 1993, President Clinton amended the process to make it more transparent and open to public consultation. With President Obama, there were efforts to 'humanise' regulatory impact analysis;[52] assessments became less focused on economic efficiency. The interests of future generations, wealth redistribution and social justice were also taken into account, even if not fully supported by a hard CBA. RIA started to focus on behavioural economics as well, to promote more flexible regulatory approaches. The Trump administration partially stayed on the same track but opted for a more monetised assessment.[53]

Impact analysis has held a prominent place in American administrative law since the end of the Second World War.[54] It is necessary for establishing the legality of regulatory acts before the courts according to the Administrative Procedure Act (APA).[55] In the abovementioned 'benzene case',[56] the Supreme Court annulled a regulation reducing maximum benzene levels at workplaces for not being based on a proper scientific justification of specific health hazards. Since then, American judges require such justification when considering policy choices made by the regulators. Insisting on the procedural aspects of regulatory assessments allows the judges to opt for a less aggressive review on the merits of the challenged measures.[57]

2.2.2 European Union

On our side of the Atlantic, the EU only applied a general impact assessment system in 2003, as part of its 'better regulation agenda'.[58] All secondary legislation texts are subject to prior impact assessment (IA). The details are

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[52] *Sunstein* 2011a.

[53] See, for instance, Executive Order 13771 of 30 January 2017, which directs all agencies to repeal at least two existing regulations for each new regulation ('one-in-two-out' requirement) and sets a cap on total incremental regulatory costs.

[54] The importance of analytical and evidence-based tools in reaching and testing public decisions is fully understood in the USA. These tools are constantly being improved to reflect more aspects of social welfare. But they cannot provide precise answers to all the questions set, nor can they always be based on a 'hard' CBA. Despite initial attempts to impose such a hard CBA, the impact studies never lead to a purely monetarised recording of costs and benefits. See *Torriti/Lofsted* 2010 and *Hahn/Litan* 2005, who compare the impact assessment model of the USA with that of the EU.

[55] *McGarity* 1991; *Breyer et al.* 2017; *Sunstein* 2001b, 2002a, 2014.

[56] *Industrial Union* 448 *U.S.* 607 (1980).

[57] *MacDonald* 1979–1980.

[58] *Garben/Govaere* 2018 and below, Chapter 8, sections 2.2 and 2.3.

described in the 'better regulation toolbox', which is updated by the European Commission on an ongoing basis.[59] IA aims to identify and describe the issue to be regulated, the alternative ways to address it and the cost–benefit ratio of the potential normative solutions. The impact is not always assessed in monetary terms. The market value of the goods involved are only reflected if this is feasible.[60] When the impacts diverge in time, a discount rate is applied, set at 4 per cent. This rate may be further reduced so that 'no unfair social cost is passed on to future generations'.[61] In addition to CBA, the toolbox includes other analytical methods as well, to be used when a fully monetised approach is impossible.[62]

While accepting the importance of impact assessment, the EU avoids being trapped by an excessively hard CBA.[63] The quality of IA studies is steadily improving. It is reviewed by a seven-member committee of the European Commission (the Regulatory Scrutiny Board). As of 2015, its opinion is necessary for their approval. These tools are also used at the stage of judicial review. We have already mentioned CFI judgment T-13/99, *Pfizer*,[64] which stressed the relationship between CBA and the principle of proportionality, omnipresent in EU law. However, there is no legal precedent corresponding to the benzene case in the USA. The CJEU has not yet annulled an EU Regulation, Directive or Decision on the grounds of deficient impact assessment. Such a development cannot be excluded. European judges are pressing EU institutions to evaluate scientific data as thoroughly as possible.[65] Nevertheless, it does not seem to be expected that they will ever require a narrowly mone-

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[59] Latest improvements in 2015: *Better Regulation Guidelines* (SWD (2015) 111 final).

[60] 'In certain cases, the impact cannot be expressed in economic terms (e.g. what is the price of increasing protection for a basic commodity or of losing biodiversity?)': Tool #51, para 1. A similar reservation is expressed in the Communication of the European Commission (2000) on the precautionary principle, where it is provided that 'the examination of pros and cons should include an economic cost/benefit analysis when this is appropriate and feasible'.

[61] *Ibid*, Tool #54, para 3.

[62] *Ibid*, Tool #55.

[63] The first impact assessment studies were introduced in European law in 1985, particularly in the field of environment protection, where a hard CBA is not possible. See Chapter 8, section 2.3.

[64] Case T-13/99, *Pfizer Animal Health v Council* (2002).

[65] See CJEU judgment C-324/15 P, *Hitachi Chemical Europe* (2017), concerning a decision of the European Chemicals Agency (ECHA) to include a chemical substance in the list of 'substances of very high concern' for human health. The Court required the ECHA to undertake every necessary scientific test of the involved risks and to assess the impacts 'beyond considerations related to the risks derived from the inherent properties of the substances involved' (item 44).

tarised efficiency assessment of the measures taken. Decision-making bodies will continue to enjoy broad discretion in setting the assessment criteria, especially for issues of public health and environmental protection. This does not mean, however, that the CJEU does not conduct a judicial review on whether impact assessment studies do indeed offer the proper basis for EU-derived legislation.[66]

3. LEGAL CERTAINTY, PUBLIC LAW'S ULTIMATE MISSION

3.1 Legal Certainty as a Public Good

Legal certainty is a fundamental rule (a *Grundnorm*, according to Hans Kelsen). Its significance was well known long before law encountered economic analysis. Yet, the latter contributes to broadening both the scope and the perception we have of legal certainty. It is not confined to protecting specific individuals; it also guarantees the efficient operation of public institutions. Legal certainty goes hand in hand with a precise and predictable normative framework. It creates the necessary trust among the subjects of law. 'Trust' is not merely an individual right; it is a public good to be provided by a system of non-consensual institutions.[67]

Moreover, legal certainty is not achieved only by imposing legality, the general duty to comply with legal norms. Legality is identified with certainty only when it regulates human relations efficiently, by imposing the proper commandments and by being respected in real life. When these additional conditions exist, it reduces the inefficiencies caused by the absence of regulation and uncertainty. It remedies situations that would otherwise generate increased transaction costs. Conversely, an 'uncertain' legal system multiplies, rather than reduces, such costs.

Legal certainty constitutes, therefore, a conjunction of legality and efficiency. Such an approach does not identify this fundamental principle only with safeguarding the 'legitimate expectations' of specific individuals. It raises additional questions for evaluating a public law system. When is the creation of public institutions or rules efficient in the name of legal certainty? How detailed must the public regulation of an activity be? How should time be treated by law? How can we efficiently introduce a legal norm and handle

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[66] For that issue, see Case C-5/16, *Republic of Poland v European Parliament and Council of the European Union* (2018) as analysed in Chapter 8, section 2.3 and Chapter 9, section 2.2.

[67] See Chapter 4, section 1.1.3.

transitional situations? When and under what circumstances should a norm be amended? For economic analysis, the answers to these questions arise from examining the pros and cons of potential options. Both the creator and the interpreter of public law must try to find the right balance.

3.2 The Costs for Achieving the Optimal Legal Norms

Economic theory sheds light on many of the above issues.[68] Ground-breaking studies deal with the costs of rule drafting and legal change.[69] They compare the advantages and disadvantages of rigid, as opposed to easily amended norms; and of laconic (short), as opposed to plethoric (oversized, detailed) regulations.[70]

Legislation that may easily change at any moment is problematic in many respects. Frequent amendments entail greater resources for introducing the new rules: repetitive drafting and training for those charged with implementation and compliance (administrative authorities, courts). In addition, they may entail occasional losses for the subjects that had invested in the pre-existing regulatory environment. Those persons bear a 'reliance cost'[71] as to the applicable norms, by joining their interests to the existing rule. Reliance is transformed into loss if the rule suddenly ceases to exist. For example, the production and sales of electric cars are directly linked to applicable tax and environmental legislation. If such legislation can be changed to the detriment of electric car owners at any time (by raising tax rates or allowing diesel automobiles in the centre of Athens), the consequences will negatively impact this economic activity. A volatile regulatory framework increases uncertainty costs.[72] To the extent that most people are risk averse, regulatory uncertainty discourages them from undertaking efficient initiatives. It makes them under-invest. Car dealers may refrain from importing electric cars (which are, still, more expensive); the automobile industry may reconsider investing in greener technologies.

However, the opposite extreme is also not optimal. Rigid rules do not promote social welfare in all circumstances. If they exceed the threshold of 'reasonable security', they drive people to inefficient choices. Both human life and the markets are of their nature unstable and constantly evolving. Public

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[68] A collection of interesting articles on this subject by *Bix* 2018. See also *Mousmouti* 2019.

[69] *Van Alstine* 2002; *O'Hara* 2017; *Parisi/Fon* 2009; *Priest* 1987, *Farina* 1989; *Kaplow* 1986, 1992, 1995; *Shavell* 1993. For public law specifically, see *Diver* 1983.

[70] *Tullock* 1995.

[71] *Portuese* 2014.311; *Parisi/Ribstein* 1998; *Parisi/Fon* 2009.

[72] *Kira* 2013.

regulation that governs them should be open to readjustments. Each legal change – even the most necessary and self-evident – will benefit some and be detrimental to others. If the latter acquire the right to demand the preservation of the *status quo*, they encumber both the Demos and the Agora with the cost of their reliance on the less efficient previous rules. Legislative improvements would become excessively difficult and expensive for the public treasury. It would be enough for one individual to invoke his violated 'trust' in the previous *status quo* for it to remain unchanged – or to make the State liable. Assimilating legal certainty with *Pareto*-efficiency[73] may lead to adverse selections. People will depend completely on the existing regulation. They will lack the incentive to innovate due to excessive security. In our previous example, rigid tax and environmental legislation for promoting hybrid cars would also be inefficient. Carmakers would have no incentive to invest in even better electric motors.

Furthermore, norms are distinguished according to another criterion. Should their drafting be elliptical or exhaustive? A laconic provision creates more uncertainty compared to a more detailed text. But it generates lower costs – due to its smaller volume – both upon drafting and upon changing it. It also reduces the need for periodic modification. General rules and legal concepts can be adapted to new realities by interpretation. By contrast, thoroughly detailed provisions are clearer, but entail higher costs[74] and enjoy a shorter lifespan.

Is there a method to calculate the optimum combination of terseness and detail when establishing a public law norm? Perhaps there is. Let's start with a non-regulated issue. Legal vacuum is a negative form to regulate: absolute and totally laconic. We continue by examining the various options to replace normative silence; from the most elliptic and volatile rules to the more thorough and stable ones. We compare their pros and cons. This analysis will lead to the following result: the legal norm will become as terse or detailed, and as rigid or flexible, as the marginal benefit of these properties is higher than the cost they generate.

This method is crucial for public law. It allows the lawmaker to achieve the highest benefit and the lowest cost, better to apply the principles of subsidiarity and proportionality. There is no golden recipe to predict which regulation – rigid or flexible, terse or detailed – is the most efficient in every case. For example, the use of vague notions in constitutions ('personal freedom', 'general interest') allows them to survive over time. By contrast, European banking legislation is exhaustively detailed and technical, with Directives and

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[73] *Portuese et al.* 2017; *Calabresi* 1991.
[74] *Di Vita* 2010, 2012.

Regulations taking up hundreds of pages.[75] Such regulation must be constantly revised and updated. The European lawmaker opted for maximum clarity in the constantly evolving sector of financial services. By acting as meticulous as possible, EU institutions hope making investors feel safe.

Once again, the saying 'every cloud has a silver lining' is confirmed. Excessive fluidity has a toxic effect upon legal certainty. Excessive rigidity and detail are also dangerous; they create conditions for unjustified protectionism. It is not efficient for the legal certainty to degenerate into unnecessary guarantees. Traditional public law is familiar with those dilemmas. Courts use the concept of 'legitimate expectations' but apply it with restraint. It only protects subjects who are 'justifiably' or 'reasonably' convinced that their situation will not be overturned.[76] The use of these adverbs reflects a cost–benefit assessment: on the one part, the costs of change incurred by both the individual and the legal system; on the other, the benefits from instituting an updated legislation. To make this assessment, the CJEU applies the criterion of the 'prudent businessman'. There is no breach of legitimate expectations by a new legislation that 'would not surprise a prudent and diligent businessman'.[77] The cost caused by a 'predictable' change is low. It does not impair the public good of legal certainty.

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[75] *Wellerdt* 2015; *Busch/Ferrarini* 2017.

[76] Case 120/86 *Mulder v Minister van Landbouw en Visserij* (1988).

[77] Cases 108/81, *Amylum v Council* (1982), 110/81; *Roquette Frères v Council* (1982) and 114/81, *Tunnel Refineries v Council* (1982); *Portuese* 2014.315.