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STRENGTHENING THE GLOBAL TRADE AND INVESTMENT SYSTEM
FOR SUSTAINABLE DEVELOPMENT



**Rethinking International Subsidies Disciplines:
Rationale and Possible Avenues for Reform**

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Rethinking International Subsidies Disciplines

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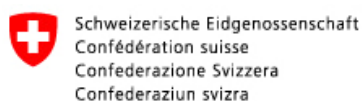
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ABSTRACT

The need for reform of subsidy rules, in particular in the direction of introducing specific exceptions for legitimate subsidies, is increasingly seen in the literature. The essence of the call for reform is that the rules, which were negotiated and designed in the 1980s and early 1990s, are not up to the job in the current climate. This paper focuses on the rationale and possible avenues of reform of subsidies disciplines in light of today's challenges. It should be read in conjunction with the analytical paper providing a review of current government practices in the area of subsidies, which constitutes its logical preamble.

The paper starts with a few basics and then moves to the specifics of the possible categories of exempted subsidies. While most of the analysis refers to the disciplines of subsidies in the goods sector, attention is also devoted to public support in the agriculture and services sectors. The main goal of this paper is to generate food for thought, and to help articulate and frame the issues raised by the introduction of legal exceptions for certain subsidies. In particular, it aims to combine the analysis of the key, general conceptual and practical issues that need to be addressed when the decision to introduce specific subsidy exceptions is taken, with the level of detail and technicality that the introduction of these rules may imply. In this latter respect, significant reference is made to the European Union (EU) experience, simply because the EU is the only other polity that has a system of subsidy control with extremely sophisticated legal justifications for "good" subsidies.

Focusing on the need for legal justifications and the shape that they may take in the World Trade Organization (WTO), the paper does not exclude that other areas of subsidy laws (such as the definition) may need some revamping. The strong belief underlying it is, however, that the biggest need for reform relates to the (re-)introduction of express exceptions for certain legitimate subsidies. There are various merits in reviving and updating the concept of non-actionability of certain subsidies in WTO subsidy disciplines.

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LIST OF ABBREVIATIONS

AoA	Agreement on Agriculture
EU	European Union
CAP	common agricultural policy
CCS	Carbon Capture and Storage
GDP	gross domestic product
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GBER	General Block Exemption Regulation
R&D	research and development
R&D&I	research, development and innovation
SAM	State Aid Modernisation
SAAP	State Aid Action Plan
SCM Agreement	Agreement on Subsidies and Countervailing Measures
SMEs	small and medium-sized enterprises
TBT	Technical Barriers to Trade
TFEU	Treaty on the Functioning of the European Union
WTO	World Trade Organization

INTRODUCTION

The need for reform of subsidy rules, in particular in the direction of introducing specific exceptions for legitimate subsidies, is increasingly voiced in the literature.¹ The essence of the call for reform is that the rules, which were negotiated and designed in the 1980s and early 1990s, are not up to the job in the current climate.

This paper focuses on the rationale and possible avenues of reform of subsidies disciplines in light of today's challenges. It should be read in conjunction with the analytical paper providing a review of current government practices in the area of subsidies, which constitutes its logical preamble.

The paper starts with a few basics and then moves to the specifics of the possible categories of exempted subsidies. While most of the analysis refers to the disciplines of subsidies in the goods sector, attention is also devoted to public support in the agriculture and services sectors.

The main goal of this paper is to generate food for thought, and to help articulate and frame the issues raised by the introduction of legal exceptions for certain subsidies. In particular, it aims to combine the analysis of the key, general conceptual and practical issues that need to be addressed when the decision to introduce specific subsidy exceptions is taken, with the level of detail and technicality that the introduction of these rules may imply. In this latter respect, significant reference is made to the European Union (EU) experience. This is not because the EU system is believed to be perfect or more generally a model to follow but simply because the EU is the only other polity that has a system of subsidy control with extremely sophisticated legal justifications for good subsidies (which cumulatively amount to a body of law of hundreds of pages).

THE BASICS

THE IMPORTANCE OF SUBSIDY EXCEPTIONS

As noted, this paper focuses on the need for legal justifications and the shape that they may take in the World Trade Organization (WTO). This focus does not exclude that other areas of subsidy laws (such as the definition) may need some revamping. The strong belief underlying this paper is, however, that the biggest need for reform relates to the

(re-)introduction of express exceptions for certain legitimate subsidies. There are various merits in reviving and updating the concept of non-actionability of certain subsidies in WTO subsidy disciplines. Three can be immediately identified.

- **Practical and symbolic value:** With an express and balanced carve-out, WTO Members would recognise that certain subsidies are overall positive and should be legitimate. The benefit of non-actionability does have a practical value (by sheltering certain agreed practices from action), and, at the same time, a symbolic one (by reaffirming that, under certain conditions, certain values may trump trade distortions).
- **Legal integrity and systemic balance:** An express (and not simply implied) conferral of "policy space" to Members minimises the risk that legitimate public policy concerns are unwarrantedly forced through the analysis of current disciplines, and with respect to legal steps and requirements that have a different function. One good example is the (limited) carve-out for renewable energy support via the interpretation of benefit in the recent *Canada – Renewable Energy* disputes.² In a word, the introduction of express and carefully drafted exceptions enables one to clearly distinguish the legal existence of subsidies from their economic, political, and legal justification. It prevents their undue conflation at the preliminary step of the determination of the existence of subsidy, which is essentially a "jurisdictional" issue only. The definition is about whether the disciplines apply or not—nothing more, nothing less. Only after something is defined as subsidy the disciplines would assess it and, if necessary, provide remedies that may be taken against it. New exceptions for subsidies would provide a positive assessment of certain measures of support and preclude the possibility that action and remedies are taken.
- **Legal certainty and security:** Irrespective of the risk and degree of trade distortions, non-actionability by definition provides legal certainty and security to subsidising governments and to the business community. These are essential conditions to enable investment to operate safely and predictably.

No revolution

It is worth noting that the introduction of specific exceptions for certain "good" subsidies does not require any revolution. The spirit of this approach was already embraced in the original design of the Tokyo Round Subsidies code and

1 See, for example, Aerni et al. (2010); Bigdeli (2011); Casier and Morenhout (2013); Cosby and Mavroidis (2014); Cosby and Rubini (2013); Howse (2009, 2010); Horlick and Clarke (2010); Rubini (2009, 2012, 2014); Steger (2010).

2 The large majority of the literature has so far criticised the Panel and Appellate Body (AB) reports in this case, outlining the "legal acrobatics" used to carve certain measures of support out of the current regulatory framework. Most of these commentators have noted the need for reform.

given some substance in the Agreement on Subsidies and Countervailing Measures (SCM Agreement). It is not different from the deeply entrenched *modus operandi* of the general exceptions of Article XX in the context of the General Agreement on Tariffs and Trade (GATT). It is worth highlighting that the discussion is not about a *carte blanche* to subsidise but about identifying and designing carefully drafted exceptions, which would recognise what Members agree as being desirable policy space and, at the same time, constrain possible abuses.

PRELIMINARY ISSUES

Before focusing on the specific categories of subsidies that should be eligible to legal protection, there are a few preliminary issues that are worth considering. These concern the reasons and case for reform, the general approach and guiding principles of reform, and, finally, the main lessons from policy discourses and economic analyses.

Reasons and case for reform

Why are current subsidy disciplines not enough to support desirable public policy objectives and remedy market failures? Could Members not simply design their support measures in a non-selective manner and/or in such a way that no distortions to trade are caused? In sum, what are the measures of support that are desirable and, under the current rules, which are the ones that would be objected to?

Laissez-faire?

It is important to note that recent law and economics literature has criticised any attempt to craft substantial disciplines controlling subsidies. The gist of the criticism is that it would be very difficult, if not impossible, to craft rules that do a reasonably good job in distinguishing good government intervention from bad. According to this literature, the most meaningful approach to subsidy control would be to limit regulation to the bare minimum necessary to safeguard market access impediments.³ Too intrusive (and non-economically-informed) disciplines may hinder the willingness of countries to enter into further liberalisation commitments.⁴ At the same time, these critics do recognise that the presence of properly crafted exceptions may reassure Members of their policy space. It is important to have these critiques in mind when suggesting law reform. In particular, every effort should be made to suggest changes that are informed to the best possible extent by economics and policy findings, while at the same time being legally rational and coherent.

General approach to subsidy exceptions: coverage and design

Coverage: How should the selection of eligible categories of legitimate subsidies (and, within it, of the specific types

of subsidies covered) be made? What are the "trade-offs" (between interests, between effects) that these categories require? Should the effort be concentrated only on those that because of their policy relevance and/or potential to distort may better deserve the benefit of non-actionability and the attention of regulation? Are there any criteria that could be used to make this selection? How much should pragmatism count in this selection? In a word, should the focus be only on those that fare a better chance of being incorporated? Does the reference to the protection of "public goods" represent a good yardstick, or in any event a good starting point, to combine both worthiness and viability of protection?⁵ Where do Members want to lay down the new "point of balance" of the disciplines?⁶

Regulatory techniques: In terms of legal techniques of drafting, what type of legal justifications should we consider? Broad or narrow? A combination of both? How can GATT XX—in both its exceptions and chapeau requirements—be of help? Or indeed other provisions with a similar function in the WTO (for example, the Agreement on Technical Barriers to Trade [TBT])? Are there alternative approaches to traditional exceptions, based, for example, on scheduling and reduction commitments (for example, the General Agreement on Trade in Services [GATS] or the Agreement on Agriculture [AoA])? Should we make more use of (rebuttable) presumptions?⁷ In sum, what regulatory techniques are useful in crafting subsidy exceptions or shelters?

Legal form: What legal form should the proposed reform envisage? Treaty amendment? Waiver? Annex to the current disciplines? Authentic interpretation or interpretative statement (for example, confirming that the general exceptions of GATT XX should apply to subsidies)? Others?⁸

Regime design and transparency: Should the reform be limited to introducing exceptions sheltering good subsidies? Or should it also extend to the regime of control itself, and in particular to transparency?⁹ The arguments suggesting such extension are essentially two.

- Transparency becomes all the more important for green-lighted measures.

3 | See Sykes (2010); Bagwell and Staiger (2006).

4 | Bagwell and Staiger (2006).

5 | Cosbey and Mavroidis (2014).

6 | Rubini (2015a).

7 | A good example comes from the previous disciplines of the SCM Agreement whereby, even if in general non-actionable, any subsidy causing "serious" adverse effects was still subject to consultation.

8 | For an analysis of these issues with respect to exceptions to cover subsidies supporting green energy, see Howse (2013); Porges and Brewer (2013).

9 | See Collins-Williams and Wolfe (2010).

- Subsidy exception regulation is very complex because it requires the assessment and balancing of various effects—knowledge, continuously evaluated and updated, is of the essence. But knowledge presupposes transparency of information and discussion based on it.

Policy and economic guidelines

The articulation of the reasons and case for reform, as well as the selection of eligible “good” subsidies and the design of their legal exceptions, requires a full analysis and discussion of the effects of subsidies and of the interests they affect. This is a sine qua non for any talk of reform. This discussion would also inevitably solicit a healthy discussion about the goals of subsidy control and disciplines in the 21st century.

The following notes attempt to summarise the main guidelines coming out of the policy and economic debate surrounding good subsidies. More guidelines pertaining to the specific categories of subsidies eligible for legal shelter will be made when appropriate.

In some cases, subsidies are better suited than other policy tools. On the one hand, subsidies may be less distorting than other instruments, for example, tariffs, because they affect one margin (that is, the producer’s) rather than two (consumer’s plus producer’s). On the other hand, where firms are underinvesting or not entering a market because they face high average costs and increasing returns of scale, a subsidy may be the first best instrument.¹⁰

From a policy perspective (that is, from the perspective of the public policy goal that the government wishes to attain), the key question is whether public support is cost effective in relation to the goals pursued by public action. If cost effectiveness is crucial for a policy tool, the limitation of trade distortions or negative trade spillovers is clearly a consideration of paramount importance in the context of a trade system. Any new set of exception rules for subsidies should strike the right balance between policy effectiveness and trade distortions. This is an essential condition to make the proposed disciplines acceptable to Members.¹¹

Subsidies can operate at different stages and have different targets. Governments may decide to subsidise consumers or instead firms, supporting, for example, their research and development (R&D) or production. Depending on the circumstances, the effects of these subsidies are different.

From a trade viewpoint, for example, consumption subsidies are believed to be less distorting than production subsidies. Always from a trade perspective, subsidies to R&D are preferable than production subsidies. More generally, the competitive position of domestic and foreign producers is not necessarily affected unless, in law or in fact, the incentive discriminates in favour of domestic production. The first basic condition for finding a trade spillover is the actual existence of trade flows or opportunities. If there is no trade, no actual or potential distortions can be found to exist.

From a policy standpoint, the effectiveness of a particular measure of support ultimately depends on the specifics of the case and, crucially, on the design of the measure and its synergy with other policies. To disentangle and assess these effects can be complex.¹² A common policy prescription is that subsidies should be as targeted as possible, with a preference for activities rather than sectors.¹³ This begs the question whether this policy preference may increase the risk of desirable subsidies being found to be selective and trade distorting. If this were the case, the case for reform would be strengthened.

In view of law reform, in a context of complexity, where the measure to regulate may cause different effects, often leading in opposite directions and requiring difficult trade-offs, it is crucial to determine what basic approach should be followed in each case. In other words, the complexity of the effects of the subsidies translates into the regulatory technique used for their exceptions. What and how many assumptions should the legislator be making? When is proceeding by presumptions not desirable, making it better to provide for an assessment to be made by the stakeholders and adjudicators on a case-by-case basis? This is the known as the “rule vs standards” distinction, which distinguishes pre-determined rules (such as the expired SCM Article 8) and general clauses (like the general exceptions under GATT XX).¹⁴

Principles for “smart” industrial policy, which attempt to combine policy effectiveness with reduction of policy spillovers, and which are also applicable to subsidies, include the following.

- **Removal of obstacles:** Policy, and institutional and cost elements in the value chain, limiting production and export should be removed.
- **Transparency:** The measure should be as transparent as possible.
- **Clear objectives:** The goals pursued should be spelt out with clear criteria for success and failure.

10 | Bagwell and Mavroidis (2010).

11 | This is why, once again, the full awareness and transparency of the trade-offs required by legal exceptions, and of the point of balance they strike is of essence for any discussion on law reform. See Rubini (2015a).

12 | See work of Carolyn Fisher.

13 | See, for example, Rodrik (2004). It is also suggested that, since market failures (and hence the policies to target them) may be difficult to identify and quantify, private and public sectors should cooperate in a “discovery process—one where firms and the government learn about underlying costs and opportunities and engage in strategic coordination.” This continuous—necessary but certainly difficult—process should assist in attuning the subsidy to changing needs and removing it when it becomes unnecessary.

14 | Kaplow (1992).

- **Only new activities:** Incentives should be provided only for “new” activities.
- **Avoidance of distortions:** The impairment of competition should be avoided.
- **Private partnership:** The project should entail private risks commensurate to public risks.
- **Agency regulation:** The government agency administering the policy should have demonstrated competence, with clear political oversight and accountability.
- **External valuations:** The project should be subject to regular external valuations.
- **Communication:** Maintain channels of communication with the private sector.
- **Support must be temporary:** To avoid opportunistic behaviour, unnecessary distortions, and excessive spending, subsidies should be granted only insofar as they are necessary to produce the incentive effect and only until the obstacle justifying them is present. Subsidies should thus only be temporary and subject to a sunset clause.¹⁵

Most—if not all—of these principles can be incorporated in new disciplines for subsidy exceptions. Crucially, their endorsement would achieve both the goals of cost effectiveness of the measure and the limitation of trade distortions.

It has to be asked, however, whether their application should be departed from in certain circumstances or with respect to certain forms of action. Are there, for example, cases where a time limit should not apply? Or where public support should extend to existing activities?

Finally, two further considerations need to be taken into account. First, policy decisions are often made in the context of scarce resources and competing priorities. Second, the quest for better policy is continuous. This is particularly true in new areas or sectors where knowledge and assessment are relatively novel. From a law reform perspective, these remarks lead one to ask when and how much leeway or flexibility the proposed exceptions should give to subsidising governments. (The qualification that, under GATT XX, a measure necessary to achieve a legitimate goal should be “reasonably available” to the government comes to mind.)¹⁶ At the same time, this continuous “knowledge gap” requires a regulatory regime that is flexible enough to be responsive to updates in assessment and evaluation (of both policies and rules). It is clear that, with so many considerations to take into account, at least in principle, the duty of the legislator is no easy feat.

These comments lead to two more general questions. How much detailed and prescriptive can legal exceptions be while at the same time allowing sufficient flexibility for policy changes and taking context-specific circumstances into account? From another perspective, how restrictive should they be to limit negative spillovers? How much should the “right to regulate” of Members be constrained?¹⁷

EXISTING SYSTEMS OF SUBSIDY CONTROL: THE EUROPEAN UNION

Despite important differences in political and legal context, the domestic system of state aid control in the EU is highly relevant when discussing reform of subsidy disciplines. It can provide inspiration both in terms of substance and regulatory techniques of the solutions to legally justify certain subsidies. Box 1 summarises the main feature of the system of state aid control and details the general features of a very sophisticated system of exceptions (for details, see Bacon 2013). Box 2 reproduces the main treaty rules.

16 | Appellate Body, *Brazil – Tyres*, para. 156.

17 | The “outer limit” to policy space in the previous system of non-actionability is worth mentioning again. If the justified subsidy was causing “serious” adverse effects, a consultation process between the aggrieved Member and the subsidising government was provided.

BOX 1:

The EU System of State Aid Control in a Nutshell

The EU system is based on a centralised and preventive authorisation of aid measures.¹⁸ The key idea is that member states of the EU have to notify their plans of aid to the EU Commission and cannot implement them before it has given the green light. Authorisation is often given after changes to the proposed measure are negotiated and introduced. The control often ends after a confidential preliminary investigation, which is a discussion between the Commission and the relevant member state. If, after this phase, doubts persist on the "compatibility of the aid with the internal market," a formal investigation phase is opened where interested parties can submit their observations. Unauthorised implementation of state aid can lead to its retroactive repayment in full (that is, capital plus interest). This can be enforced before the competent national courts of the EU member states that have the power and duty to draw all inference from the illegality of the aid. Since 1957, the Treaty of Rome incorporated a notion of state aid. This definition has been construed in a broad way. In particular, there is no need to prove an actual distortion of competition or an effect on intra-EU trade. Any measure that provides a selective aid granted by the state and through state resources is deemed to be in principle "incompatible with the internal market."

This means that the net is cast very wide. It enhances the power of control of the "agent," that is, the EU Commission. This broad definition/prohibition partly explains why there is a broad system of exceptions. Through their administration, the EU Commission has also managed to harmonise national subsidies in line with broad horizontal objectives of EU interest, while at the same time keeping subsidy wars at bay and controlling trade and competition distortions. The power to grant authorisations was already recognised in the 1957 Treaty of Rome, which did provide a few general clauses where the Commission could declare aid "compatible with the internal market" (see Box 2). With time these general clauses have been developed into soft law and guidelines that have crystallised the practice of the Commission and the case law of the Court of Justice. More recently, these guidelines have been transformed into hard law, that is, Regulations in the EU jargon.

Most interestingly, there is now a double track for justifications. On the one hand, one still has significant examples of soft law guidelines that the Commission applies in its case-by-case scrutiny of notified aid. On the other hand, since 2001, hard law "block exemptions" have been introduced. Drawing inspiration from the approach typical in EU anti-trust law, these Regulations provide for terms and conditions which, if satisfied, ensure that the aid measure is automatically authorised, without there being any need for individual scrutiny by the Commission. Although technically there is no duty of notification for these measures, there are mechanisms to ensure transparency and checks by other Members and the Commission. Through this system of block exemption, the Commission has intended to free resources to devote to the more troublesome, that is, distorting, aid measures. The main block exemption is the General Block Exemption Regulation (GBER), which was reviewed and adopted in May 2014. If the conditions of the block exemption are not satisfied, planned aid must still be notified by the Commission that assesses it on a case-by-case basis using the relevant soft law guidelines. In May 2012, the EU Commissioner for Competition started a full review of state aid disciplines (the so-called "State Aid Modernisation" process, or SAM), which has led to the review of all soft law and hard law instruments.¹⁹ The process of reform was effected after broad consultations with all relevant stakeholders. The categories of exemptions are numerous and broad, including regional aid; aid for small and medium-sized enterprises (SMEs); environmental and energy aid; risk capital; aid for research and development and innovation (R&D&I); training and employment aid; rescue and restructuring aid; and aid for agriculture and fisheries, transport and shipbuilding, media and communications, coal and steel, and the financial sector. Especially since the 2005 State Aid Action Plan (SAAP), there has been an increasing use of economic analysis in the design and implementation of the exceptions, with an express reference to concepts such as market failures and incentive effects. The use of a three-step "balancing test" that the Commission applies in its individual assessment of plans of aid is noteworthy. It comprises the following—(i) is the aid aimed at a well-defined objective of common interest, for example, environmental protection?; (ii) is the aid well designed to achieve that objective (is the aid appropriate, does it produce an incentive effect, is it proportional)?; and (iii) are the distortions on competition and effect on intra-EU trade limited, so that the overall balance is positive?²⁰ Finally, it is worth highlighting two recent initiatives. First, the further push to improve transparency. Second, the ex-post evaluation of state aid authorised and granted, which is meant to improve the quality of both subsidies and their regulation.

18 | For information on state aid, see this portal, http://ec.europa.eu/competition/state_aid/overview/index_en.html.

19 | For details on this process and the legislation adopted, see http://ec.europa.eu/competition/state_aid/modernisation/index_en.html.

20 | For an analysis of the test, see Friederiszick et al. (2008).

SPECIFIC CATEGORIES

INTRODUCTORY NOTES

After dealing with the basic questions and outlining the reasons and case for reform of subsidy exceptions, the paper now briefly focuses on the specific candidates for non-actionability. Reference is made to the remarks above on coverage and design, as well as to policy and economic guidelines.

Casting from the existing literature and debate, the paper identifies the following categories as good candidates for subsidy disciplines.

- Research, development, and innovation
- Energy and environment
- Regional and development
- Agriculture, fisheries, and food security
- Others (rescue and restructuring/adjustment, public health, natural disasters, services)

These categories, which are often composite (inasmuch as they include subsidies with different but cognate objectives) seem to reflect the major challenges facing the world at the beginning of the 21st century. As such, they are good candidates to solicit debate and talk of reform.

Crucially, many of the objectives pursued by these subsidies can be looked at as “public goods.”²¹ This classification may be important since it would identify subsidies that aim to or can benefit all or a significant number of Members (while asking some of them to bear some trade distortions in specific cases). Recent literature has highlighted the importance of linking the subsidy exception reform discourse to public goods.²²

21 This term is not used in the strict economic sense of goods for which the properties of excludability and non-rival consumption apply. The concept of “public good,” often referred to as “global or common public good,” is often used in a more general fashion. In this usage, it refers to those situations where, for various reasons, there is a lack of private initiative and the result is that the relevant goods or services are undersupplied. It also clearly refers to those goods or services whose delivery satisfies collective, and often cross-border, needs.

22 See Cosbey and Mavroidis (2014).

BOX 2:

EU State Aid Treaty Rules (Exemptions) in a Nutshell

Article 107 of the Treaty on the Functioning of the European Union (TFEU, initially 1957 Treaty of Rome).

1. Save as otherwise provided in the Treaties, any aid granted by a member state or through state resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between member states, be incompatible with the internal market.
2. The following shall be compatible with the internal market:
 - (a) aid having a social character, granted to individual consumers, provided that such aid is granted without discrimination related to the origin of the products concerned;
 - (b) aid to make good the damage caused by natural disasters or exceptional occurrences;
 - (c) aid granted to the economy of certain areas of the Federal Republic of Germany affected by the division of Germany, in so far as such aid is required in order to compensate for the economic disadvantages caused by that division. Five years after the entry into force of the Treaty of Lisbon, the Council, acting on a proposal from the Commission, may adopt a decision repealing this point.
3. The following may be considered to be compatible with the internal market:
 - (a) aid to promote the economic development of areas where the standard of living is abnormally low or where there is serious underemployment, and of the regions referred to in Article 349, in view of their structural, economic and social situation;
 - (b) aid to promote the execution of an important project of common European interest or to remedy a serious disturbance in the economy of a member state;
 - (c) aid to facilitate the development of certain economic activities or of certain economic areas, where such aid does not adversely affect trading conditions to an extent contrary to the common interest;
 - (d) aid to promote culture and heritage conservation where such aid does not affect trading conditions and competition in the Union to an extent that is contrary to the common interest;
 - (e) such other categories of aid as may be specified by decision of the Council on a proposal from the Commission.

It is worth noting that the crux of the issue for non-actionability is always the same, and it is terribly simple.²³ Providing an exception for certain legitimate but distorting subsidies means that countries need to accept a trade-off.²⁴ Whereas the measure may certainly produce significant negative externalities across the border, the benefit may not necessarily (and immediately) be felt beyond the boundaries of the subsidising country. The scenarios may be different, and may give rise to different welfare scenarios, depending, for example, on the time span considered. It remains that, at least from a short-term perspective (which is often the one that prevails, at least politically), the beneficial effect may well be produced only at a local level and the distortions at the international level.²⁵ This is the conundrum that needs to be overcome when one starts to think about providing exceptions for some good subsidies. The above analysis can generate a good rule of thumb on the acceptability of a positive objective pursued by subsidies—the higher the rank of the interest and the broader the impact of the (net) benefit, the easier may be the acceptance of the trade-off.²⁶

The argument has been made that repeated application of the Kaldor-Hicks criterion can lead to a Pareto-superior situation if all persons are both winners and losers in different situations. This argument presupposes that the gains and losses are evenly distributed among the whole population or all interest holders, which is not always the case.²⁷ It is in this respect that the possibility of anchoring the public policy objective and the subsidy pursuing it to a concept of “public” or “common” good can be fully appreciated.

Finally, it is clear that an overlap between two or even more of these categories (for example, energy, environment, public health, or R&D) is possible. From an operative point of view, the key question is how this overlap should be dealt with. If possible, this should be avoided (through neat jurisdictional/conflict clauses) unless there is a justification for a cumulative application, that is, the need for protecting a higher magnitude of support.

The following sections of the paper will briefly look at the various candidates for protection, comparing—if appropriate—any previous WTO disciplines with the corresponding EU state aid laws.

RESEARCH, DEVELOPMENT, AND INNOVATION

Rationale and policy/economics

Innovation is key in any economic sector. It may take shape in various stages of the production process, but the focus is often on R&D (as preceding to and opposed to production) stages. Various market failures, such as information asymmetries, capital market imperfections, and positive externalities, often operate as obstacles to innovation. Public action in support of R&D activities typically takes the form of

property rights (that is, intellectual property protection) or financial incentives.

The risk of trade distortions increases the more targeted the subsidy is and the more down the line—close to development and even production—it is granted.

Previous rules

Article 8.2(a) of the SCM Agreement provided that the following subsidies were non-actionable—assistance for research activities (with the exclusion of fundamental research having no industrial or commercial character),²⁸ covering no more than 75 percent of the costs for industrial research,²⁹ and 50 percent for pre-competitive research.³⁰ The eligible costs included personnel, instruments, equipment, land and building only used for the research activity, consultancy, additional overhead costs, and other running costs. The allowable levels of non-actionable assistance were to be established by reference to the total eligible costs incurred over the duration of an individual project.

23 | Rubini (2009: 56).

24 | In essence this is the trade-off implied in the Kaldor-Hicks efficiency standard and its compensation. The compensation between one's gain and one's loss is only hypothetical and abstract. This means that a political trade-off is required, and one that the society at issue should be ready to make. See also Rubini (2015a).

25 | As noted, this may be partly different when the subsidy targets a “public good.”

26 | The “net” benefit is the one that discounts the negative externalities caused by the subsidy.

27 | Kerber (2008).

28 | In particular, the provisions of the SCM Agreement did not apply to fundamental research activities independently conducted by higher education or research establishments. The term “fundamental research” means an enlargement of general scientific and technical knowledge not linked to industrial or commercial objectives.

29 | According to the SCM Agreement, the term “industrial research” means planned search or critical investigation aimed at discovery of new knowledge, with the objective that such knowledge may be useful in developing new products, processes or services, or in bringing about a significant improvement to existing products, processes, or services.

30 | Under the SCM Agreement, the term “pre-competitive development activity” means the translation of industrial research findings into a plan, blueprint or design for new, modified or improved products, processes or services whether intended for sale or use, including the creation of a first prototype which would not be capable of commercial use. It may further include the conceptual formulation and design of products, processes or services alternatives, and initial demonstration or pilot projects, provided that these same projects cannot be converted or used for industrial application or commercial exploitation. It does not include routine or periodic alterations to existing products, production lines, manufacturing processes, services, and other ongoing operations even though those alterations may represent improvements.

EU state aid on R&D&I

Following the two-track approach, some forms of aid are eligible to be block exempted and are not subject to notification. The Commission on a case-by-case basis must assess those cases that do not fall within the conditions of the block exemption. It uses the new framework for state aid for research, development, and innovation (R&D&I Framework). EU state aid law is pretty comprehensive and covers numerous R&D projects (fundamental research, industrial research, experimental development), feasibility studies, research infrastructure, innovation clusters, process and organisational innovation, and SME innovation aid. In addition to the aid objective/eligible cost, further limitations come from the allowable aid intensity and maximum ceiling. The aid intensity for fundamental research is 100 per cent. This number decreases along the innovation line with smaller intensities (that is, 25–40 per cent) for experimental development. SMEs benefit from higher aid intensities. Higher intensities are allowed following a case-by-case assessment. The R&D&I rules have been recently updated and their scope, ceilings, and aid intensities have been significantly increased.³¹

Policy options and questions

- The previous approach, with pre-defined rules setting out eligible costs, seems reasonable. It may be prone to micro-management and formalism but is probably the one that can better address the concerns of abuse of the system.
- Is the reinstatement of previous rules enough (even on the assumption that their coverage was significant, also when compared to current EU rules; for example, no ceilings to permitted subsidisation)? Is there a case for further expansion, or just clarification?
- How to ensure the "incentive effect," or that without the subsidy we would not have the desired activity?
- How to keep the distortions of competition to the minimum while maintaining the incentive to invest?

ENERGY AND ENVIRONMENT

Rationale and policy/economics

These are indeed three different areas, but the link between them may centre on the notion of sustainability.

Several market failures are indicated that would slow the development of a green economy.³² More generally, a classic example of negative externalities is that of environmental pollution (in the absence of cost internalisation instruments, such as regulation or incentives).

Among the various obstacles to green energy and its competitiveness, the existence of significant support to conventional fossil fuel energy (both in terms of subsidies

to production and consumption) cannot be overlooked. At the same time, often thanks to public support, green technologies are developing extremely fast. As a result, some types of clean energy, such as solar, are almost on a par with conventional energy. This means that some degree of differentiation is needed in any new disciplines providing for exemptions to subsidies (that is, certain sources need more/less protection than others).

Previous rules

Article 8(c) of the SCM Agreement sanctioned assistance to promote adaptation of existing facilities (those in operation for at least two years) to new environmental requirements resulting in greater constraints or financial burdens, provided that certain conditions were satisfied. These included it being a one-time non-recurring measure, limited to 20 per cent of the cost; it not covering replacement and operating costs directly linked and proportionate to the planned reduction of nuisance and pollution (and not covering any manufacturing cost savings achieved); and it being available to all firms adopting new equipment and/or production processes.

In sum, the previous rules were quite narrow (for example, no investment aid, extremely low intensity, no operating aid, and only extra costs of new environmental standards).

EU state aid on energy and environment

As with R&D&I aid, we have a two-track approach, some subsidies are block exempted, others may be authorised by the Commission. The GBER covers the following forms of aid.

- Investment aid to go beyond EU standards.
- Investment aid to increase the level of environmental protection in the absence of EU standards.
- Investment aid for an early adaptation to future EU standards.
- Investment aid for energy efficiency.
- Investment aid for high-efficiency cogeneration and for energy-efficient district heating and cooling.
- Investment aid for the promotion of energy from renewable energy sources (further details—production subsidies for sustainable biofuels; aid only for new installations; only extra-investment costs; and operating aid following a competitive bidding process to become the rule in 2016).
- Aid in the form of reduction of environmental taxes.
- Aid for the remediation of contaminated sites.
- Aid for waste management (recycling and reutilisation).
- Aid for energy infrastructures.
- Aid for environmental studies.

31 See Commission Regulation N.651/2014 (17.06.2014) (OJ L 187, 26.06.2014) (the GBER) and the Communication from the Commission — Framework for State Aid for Research and Development and Innovation (the new "Framework") (OJ C 198, 27 June 2014).

32 See, for example, Cosby (2013).

Each type of aid has different intensities (which may vary, for example, increasing when the beneficiary is a SME) and other conditions to ensure the incentive effect and reduce distortions.

The possibility of exemption is increased further by the guidelines. The coverage of the new guidelines (adopted in April 2014) is very similar to that of the GBER but provides more generous conditions (always subject to case-by-case scrutiny by the Commission).³³ Further types of aid (not included in the GBER) encompass aid to Carbon Capture and Storage (CCS), aid in the form of tradable permits in cap-and-trade systems, and aid for the relocation of undertakings in areas where pollution will have a less damaging effect. As with the GBER, aid intensities vary with more generous treatment for SMEs.

The new guidelines extend the scope of the previous guidelines to the energy field, in particular to cover state aid to energy infrastructure projects, generation adequacy measures, and energy-intensive users. The rules for supporting renewable energies are modernised to take their increasing share in the electricity market and the need to make support systems sustainable for society into account. Interestingly, the new guidelines adopt a stricter approach towards renewable energy support. Feed-in tariffs are progressively replaced by competitive bidding processes that will increase cost effectiveness and limit distortions of competition.³⁴

All in all, the EU rules on environmental and energy aid are significantly broader on every count (coverage, costs, intensities) than the previous WTO rules.

Policy options and questions

- The previous approach, with pre-defined rules setting out eligible costs, seems reasonable. It may be prone to micro-management and formalism but is probably the one that can better address the concerns of abuse of the system.
- Reinstate and expand previous rules, both in terms of coverage of categories of subsidies and degree of support.
- The key question is how ambitious (and comprehensive) the new rules should be. What kind of inspiration can the EU system offer?
- How can the existence of fossil fuel subsidies, and that green energy support often aims to level the playing field with conventional energy sources, be taken into account in future disciplines?
- Can the negotiations on fisheries subsidies offer some inspiration for new subsidy disciplines in the field of energy and the environment?³⁵
- How to ensure the incentive effect, or that without the subsidy we would not have the desired activity?
- How to keep the distortions of competition to a minimum while maintaining the incentive to invest?

REGIONAL AND DEVELOPMENT AID

Rationale and policy/economics

Regional aid is often used as a development tool for underdeveloped areas. While the rationale for this type of support is often based on redistribution, its efficiency or effectiveness is often challenged.³⁶ It looks like aid can be just one element of a regional development strategy and cannot work on its own to generate development. In the case of the EU, a common policy on regional aid was also aimed at tackling competitive overbidding for mobile investment projects.

The empirical results are a mixed bag. This is clear if the case of Europe is considered. In some cases, regional aid has been effective, in other cases less so. The key question is what obstacles have precluded the effectiveness of this type of support, or what has really been the contribution of regional aid to development. This is a question of design of the incentive, of synergy with other policy tools, and of the economic, legal, and political context in which this type of support operates.

Previous rules

Article 8(b) of the SCM Agreement provided assistance to disadvantaged regions within the territory of a Member, given pursuant to a general framework of regional development and non-specific within the eligible regions.³⁷ Further conditions were the following.

- (a) Each disadvantaged region must be a clearly designated contiguous geographical area with a definable economic and administrative identity.
- (b) The region is considered as disadvantaged on the basis of neutral and objective criteria,³⁸ indicating that its difficulties arise out of more than temporary circumstances; such criteria must be clearly spelled out in law, regulation, or other official document, so as to be capable of verification.

33 | Communication from the Commission — Guidelines on State aid for environmental protection and energy 2014-2020 (OJ C 200, 28 June 2014).

34 | It is interesting to compare this with the AB ruling in *Canada – Renewable Energy* and ask whether this is the beginning of a trend. See Rubini (2015b).

35 | Bigdeli (2008).

36 | See Sykes (2010).

37 | According to the SCM Agreement, a "general framework of regional development" means that regional subsidy programmes are part of an internally consistent and generally applicable regional development policy and that regional development subsidies are not granted in isolated geographical points having no, or virtually no, influence on the development of a region.

(c) The criteria shall include a measurement of economic development, which shall be based on at least one of the following factors,

- one of either income per capita or household income per capita, or gross domestic product (GDP) per capita, which must not be above 85 percent of the average for the territory concerned;
- unemployment rate, which must be at least 110 percent of the average for the territory concerned;
- as measured over a three-year period; such measurement, however, may be a composite one and may include other factors.

EU state aid on regional aid

Regional aid has been one of the key elements of the EU state aid policy.³⁹ This refers to national aid, that is, the aid of member states, which has to be considered together with EU regional aid (via structural and cohesion funds). The idea is to reduce or even eliminate significant economic and social disparities between Europe's regions. Regions are distinguished as those that are underdeveloped against an EU benchmark or a national benchmark, with the former being eligible for higher levels of subsidies. On the basis of regional maps drawn up by member states, which identify the geographical areas in which companies can receive investment aid and at what level, the framework provides for different aid intensities. Aid to large companies is subject to stricter rules. Those cases of investment that are believed to be less distortionary are block exempted—these include certain types of regional operating aid and urban regeneration. Eligible costs include both investment costs in tangible and intangible assets and wage costs.

Policy options and questions

- The previous approach, with pre-defined rules setting out eligible costs, seems reasonable. It may be prone to micro-management and formalism but is probably the one that can better address the concerns of abuse of the system.
- Reinstate the previous rules but any need for adjustment?
- The key question is how these subsidies should be designed to ensure the desired incentive effect. Can a simple subsidy to attract investment and relocate activities be enough? Can regional subsidies lead to uncovering latent comparative advantages? This leads to considering the synergy with other policy instruments.
- Surely, these regional subsidies cannot exhaust the needs of developing countries. What other types of subsidies or exceptions should be provided for them?

AGRICULTURE, FISHERIES, AND FOOD SECURITY

Support to agriculture is widespread and has many, sometimes conflicting, objectives. It is very controversial since it may distort trade and harm the environment. At the same time, properly designed support may compensate for natural events and be sustainable. The link with food security is strong. The link with energy and the environment is also strong (consider, for example, biofuels production). If trade distortions have to be avoided, de-coupling (that is, separating aid from production) is the magic word. Support in the field of natural resources (for example, fisheries) may lead to overexploitation and hence to the tragedy of the commons.

WTO Agreement on Agriculture framework in a nutshell

The AoA includes special rules on export and domestic subsidies to agricultural products.⁴⁰ The main characteristic of the resulting regulatory framework, which operates in a different way compared to the SCM Agreement, is that these subsidies may be granted provided that they stay within the scheduled commitments of the relevant Members. There are crucially special provisions (Annex 2, or the Green Box) for certain non-distorting subsidies that, satisfying certain conditions, are permitted. Till Article 13 (the Peace Clause) expired, agricultural subsidies that were compliant with the rules of the AoA were essentially sheltered from action under the SCM Agreement. This is now ended, and possible action under the SCM Agreement is, at least in principle, a possibility. During the Doha Round, specific negotiations on fisheries subsidies have taken place but have so far not resulted in any law reform.

EU state aid

The EU rules on competition, which include state aid, "shall apply to production of and trade in agricultural products only to the extent determined by the European Parliament and the Council ... account being taken of the objectives [of the common agricultural policy, CAP]" (Article 42 TFEU). The

³⁸ "Neutral and objective criteria" means criteria that do not favour certain regions beyond what is appropriate for the elimination or reduction of regional disparities within the framework of the regional development policy. In this regard, regional subsidy programmes shall include ceilings on the amount of assistance that can be granted to each subsidised project. Such ceilings must be differentiated according to the different levels of development of assisted regions and must be expressed in terms of investment costs or cost of job creation. Within such ceilings, the distribution of assistance shall be sufficiently broad, even to avoid the predominant use of a subsidy, or the granting of disproportionately large amounts of subsidy, by certain enterprises as provided for in Article 2.

³⁹ See the GBER. See also the new Guidelines on regional state aid for 2014–2020 (OJ C209, 23 July 2013).

⁴⁰ For more details, see Rubini (2013).

regulatory framework of the CAP is based on two pillars—first, price support and market management; second, rural development. As a consequence of the 2003 mid-term review of the CAP, no specific form of production is required for its receipt (de-coupling). State aid control has normally been applied to goods subject to the CAP.

Policy options and questions

- There are two main issues that need to be addressed from a law reform perspective. The first is about the jurisdictional limits of the AoA vis-à-vis the SCM Agreement. The second is the content of the categories of non-actionable agricultural subsidies.
- The broader, overarching issue is the relationship between the general subsidies disciplines of the SCM Agreement and the special disciplines for agriculture of the AoA.
- The key issue, in particular, is to what extent subsidies that are non-actionable under the AoA should nonetheless be actionable under the SCM Agreement.
- As the law currently stands, there are good reasons to believe that a subsidy that is covered by the Green Box Annex 2 cannot de facto be actionable under the SCM Agreement, since one of the general conditions for eligibility in Annex 2 is the absence of trade distortions. The case would of course be different in a law reform perspective—considering it desirable to shelter subsidies may also have some distorting impact.
- The solution is not a vague or partial “peace clause” but a fully rethought “conflict of laws” or “pre-emption” clause. By the same token, leaving the issue to general interpretative principles (that is, *lex generalis-lex specialis*) would run counter the purpose of this initiative, which is to strengthen legal certainty and legal security for business and governments.
- With respect to the content of the Green Box, there are various uncertainties in the language and requirements that seem to lessen their coverage and impair their relevance.⁴¹
- As the 2013 Bali ministerial has made it particularly evident, food security is increasingly an issue, and a trade issue. And subsidies are often invoked as a tool to ensure food security. Does food security require support to be trade distorting? If so, should these subsidies be permitted? The same consideration may be made for subsidies with environmental/energy objectives. For example, may the need to produce biofuels result in trade distortions? Should these be permitted?
- Can the AoA and its emphasis on scheduling and reduction commitments be of some inspiration for rethinking the SCM Agreement?

- Was the balance struck in the fisheries subsidies discipline a good one, safeguarding trade and environmental considerations?

OTHER AREAS

Other areas that could be considered as good candidates for exceptions are the following.

- **Rescue and restructuring (or “adjustment”):** This type of “adjustment” aid was being discussed in the Uruguay Round and did feature in some of the SCM Agreement drafts. It was eventually dropped. In the light of the experience of the massive bailouts in the wake of the financial and economic crisis, this could be a good candidate. EU law—again—can provide some inspiration or could be a good starting point of discussion.⁴²
- **Natural disasters:** Nature cannot be controlled. Regularly, and sometimes cyclically, natural disasters occur, and do often require massive public support.
- **Public health:** Closely linked to environmental aid. It may be worth considering it. The question may be asked whether some of the eligible forms of support are related to goods or better to services.
- **Services:** It is incredible that there is no discipline on subsidisation to the service sectors. The financial crisis and the massive investment in banks and financial institutions have from this perspective completely been left unregulated (under the GATS, specific commitments like national treatment do apply in a very limited way).⁴³ This regulatory gap is even more incredible if one considers the huge share of these sectors in some economies. Serious efforts should be made to introduce specific disciplines of subsidies to services. While the general exceptions of Article XIV of the GATS may well apply, one may consider introducing specific, and more detailed, exceptions, for example, for public services. As for more specific categories, one can draw on the scholarly and policy debate that was quite rampant after Seattle (see, for example, public health, education and

41 | Rubini (2013).

42 | See Communication from the Commission — Guidelines on State Aid for Rescuing and Restructuring Non-financial Undertakings in Difficulty (OJ C 249, 31 July 2014). Note, however, that during the financial and economic crises, special rules—providing for faster and laxer scrutiny—have been in place. For details, see http://ec.europa.eu/competition/state_aid/legislation/temporary.html. The most recent details of the aid in the EU during the crisis can be found in the State Aid Scoreboard of 2014; see http://ec.europa.eu/competition/state_aid/scoreboard/financial_economic_crisis_aid_en.html.

43 | See note 42 for the EU state aid rules applicable to aid to financial institutions during the crisis.

cultural services, water).⁴⁴ From a trade perspective, a properly designed subsidy exception is probably better than an authoritative or interpretive statement that these services are “governmental” and hence outside the scope of the disciplines altogether.

PATH OF REFORM

This paper has focused on law reform as the final step of a process. The paragraphs that follow present two comments on the process that can lead to reform and prepare for it.

Largely, it is a matter of “building on what we have and preparing for what may come.” It is also a matter of “going back to GATT pragmatism” and also to its imagination (and the one that led to the impressive results of the Uruguay Round).

Operationally, this essentially means fostering expert-led discussions on policies of support, their effects and effectiveness, both inside the WTO (making full use of the Subsidies Expert Group and ancillary bodies indicated in SCM Article 25, paras 1 to 5) and outside it (the E15Initiative is a good example). Expert discussions feature two advantages. First, they depoliticise the discussion. Second, they contribute to building knowledge and do the groundwork for the time when new rules can be negotiated.

REFERENCES

Aerni, Philipp et al. 2010. “Climate Change, Human Rights and International Economic Law: Exploring the Linkages between Human Rights, Trade and Investment.” 53, *German Yearbook of International Law*, p. 139.

Bacon, Kelyn. 2013. *European Union Law of State Aid*. 2nd edition, Oxford University Press.

Bagwell, Kyle and Staiger, Bob. 2006. “Will International Rules on Subsidies Disrupt the World Trading System?.” *American Economic Review*, p. 877.

Bagwell, Kyle and Mavroidis, Petros. 2010. “Too Much, Too Little, ... Too Late?” in Kyle W. Bagwell, George A. Bermann and Petros C. Mavroidis (eds), *Law and Economics of Contingent Protection in International Trade*, Cambridge University Press, p. 168.

Bigdeli, Sadeq. 2011. “Resurrecting the Dead? The Expired Non-Actionable Subsidies and the Lingering Question of ‘Green Space.’” 2, *Manchester Journal of International Economic Law*, p. 27.

Bigdeli, Sadeq. 2008. “Will the Friends of Climate Emerge in the WTO? The Prospects of Applying the Fisheries Subsidies Model to Energy Subsidies.” *Carbon and Climate Law Review*. p. 78

Casier, Liesbeth and Morenhout, Tom. 2013. “WTO Members, Not the Appellate Body, Need to Clarify Boundaries in Renewable Energy Support.” IISD Commentary.

Collins-Williams, Terry and Wolfe, Robert. 2010. “Transparency as a Trade Policy Tool: The WTO’s Cloudy Windows.” *World Trade Review*, p. 551.

Cosbey, Aaron. 2013. “Green Industrial Policy and the World Trading System.” Issue Brief ENTWINED 2013/10/30.

Cosbey, Aaron and Mavroidis, Petros. 2014. “A Turquoise Mess: Green Subsidies, Blue Industrial Policy and Renewable Energy: The Case for Redrafting the Subsidies Agreement of the WTO.” *Journal of International Economic Law*. p. 11

Cosbey, Aaron and Rubini, Luca. 2014. “An Assessment of the Effectiveness of Renewable Energy Measures and of the Implications of the Canada – Renewable Energy/FIT Disputes.” E15Initiative, Clean Energy and the Trade System Group – Proposals and Analysis, Dec., p. 41.

Friederiszick, Hans W., Röller, Lars-Hendrik and Verouden, Vincent. 2008. “European State Aid Control: An Economic

Framework." In Paolo Bucirossi (ed.), *Handbook of Antitrust Economics*, MIT Press, Cambridge, MA, p. 625.

Horlick, Gary N. and Clarke, Peggy A. 2010. "WTO Subsidies Disciplines During and After the Crisis." 13, *Journal of International Economic Law*, p. 859.

Howse, Robert. 2009 "Do the World Organization Disciplines on Domestic Subsidies Make Sense? The Case for Legalizing Some Subsidies." In Kyle W. Bagwell, George A. Bermann and Petros C. Mavroidis (eds), *Law and Economics of Contingent Protection in International Trade*, Cambridge University Press, Cambridge.

Howse, Robert. 2010. *Climate Change Mitigation Subsidies and the WTO Legal Framework: A Policy Analysis*. Manitoba: International Institute for Sustainable Development, Winnipeg.

Howse, Robert. 2014. "Securing Policy Space for Clean Energy under the SCM: Alternative Approaches." E15 Initiative, Clean Energy and the Trade System Group – Proposals and Analysis, Dec., p. 50.

Kaplow, Louis. 1992. "Rules Versus Standards: An Economic Analysis." *Duke Law Journal*, p. 557.

Kerber, Wolfgang. 2008 "Should Competition Law Promote Efficiency? Some Reflections of an Economist on the Normative Foundations of Competition Law." In Josef Drexler, Laurence Idot and Joel Moneger (eds), *Economic Theory and Competition Law*, Edward Elgar, Cheltenham, pp. 1–22.

Krajewski, Markus. 2002. "Public Services and Trade Liberalization: Mapping the Legal Framework." *Journal of International Economic Law*, p. 341.

Newfarmer, Richard. 2011. "10 Principles for Smart Industrial Policy." Paper for the IISD's Trade, Investment and Climate Change: Searching for Progress and Key Issues Conference, Geneva, 18 Oct., www.iisd.org/pdf/2011/tri-cc_conf_2011_newfarmer.pptx.

Porges, Amelia and Brewer, Thomas. 2014. "Climate Change and a Renewable Energy Scale-up: Responding to Challenges Posed to the WTO", E15Initiative, Clean Energy and the Trade System Group – Proposals and Analysis, Dec., p. 55.

Rodrik, Dani. 2004. *Industrial Policy for the XXIst Century*. Harvard John F. Kennedy School of Government, Cambridge, MA.

Rubini, Luca. 2009. *The Definition of Subsidy and State Aid – WTO Law and EC Law in Comparative Perspective*. Oxford University Press, Oxford.

Rubini, Luca. 2012. "Ain't Wastin" Time No More: Subsidies for Renewable Energy, the SCM Agreement Policy Space and Law Reform." *Journal of International Economic Law*, p. 525.

Rubini, Luca. 2013. "Subsidies for Emissions Mitigation under WTO Law." In Geert Van Calster and Denise Prevost (eds), *Research Handbook on Environment, Health and the WTO*, Elgar, Northampton, p. 561.

Rubini, Luca. 2014. "What Does the Recent WTO Litigation on Renewable Energy Subsidies Tell Us About Methodology in Legal Analysis? The Good, the Bad, and the Ugly." Robert Schuman Centre for Advanced Studies Research Paper, 2014/5.

Rubini, Luca. 2015a. "ASCM Disciplines and Recent WTO Case Law Developments: What Space for 'Green' Subsidies?." Robert Schuman Centre for Advanced Studies, Global Governance Programme, 153, 2015/3.

Rubini, Luca. 2015b. "The Wide and the Narrow Gate: Benchmarking in the SCM Agreement After the *Canada – Renewable Energy/FIT Ruling*." *World Trade Review*, p. 211.

Steger, Debra. 2010. "The Subsidies and Countervailing Measures Agreement: Ahead of its Time or Time for Reform?." 44, *Journal of World Trade*, p. 779.

Sykes, Alan. 2010. "The Questionable Case for Subsidies Regulation: A Comparative Perspective." *Journal of Legal Analysis*, p. 473.

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