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Abstract

In a world in which barriers to trade at all levels - international and internal - are mostly a by-product of the implementation by governments of different regulatory policies to deal with "domestic" or "local" problems, the mechanisms that are set in motion by the operation of competition among the governments inhabiting the different jurisdictional tiers of federal countries lead to outcomes that are different from those generated by the 'agreed-upon' rules that govern the relations of national governments with each other in matters of international trade. A model is used to compare two ways of dealing with the external damages that are consequent on the pursuit of beneficial domestic regulatory policies. It assumes that at the international level the methods used can be synthesized by what is known as the least-restrictive means principle, while in the context of competitive federalism the methods lead to what can be called a proper balancing of benefits and costs of domestic policies, including the spillover costs inflicted on others. With the help of this model, the paper shows that one or the other of the two sets of methods could be more restrictive, depending on the magnitude of spillovers and the relation between the instrument used and the achievement of the domestic objective. It includes also a discussion of the case of the European Union, which falls between these two polar extremes.

Keywords: barriers to trade, federalism, free trade, regulation
Mots-clefs: barrières aux échanges, fédéralisme, libre-échange, réglementation

1. Introduction

Barriers to trade which are the product of government policies exist between countries and between sub-central jurisdictions within countries. In the discussion of international barriers to trade, the emphasis has shifted recently from "border" barriers (namely tariffs and quotas) to "non-border" or "behind-the-border" barriers (namely impediments to trade resulting from differences in domestic policies). Three developments have motivated this shift: first, the increased integration or globalization of the world economy, itself in part a consequence of past and current achievements in the dismantling of border barriers to trade; second, the growing importance of services as opposed to goods, both as a share of GDP and of international transactions; and third, the increased concerns of the public with issues like health and the environment.

That shift is reflected in the introduction in trade theory of a new vocabulary: "deep integration" contrasted with "shallow integration", "level-playing field", "single market", "fair trade", and so on. These terms pertain to two closely related but different kinds of relationships between domestic policies and free trade. In a first set of cases, integration or globalization of the world economy brought about by market mechanisms such as technology transfers and capital mobility erodes or endangers, almost mechanically, the domestic policies that pertain to income redistribution, labor standards, or protection of the environment. In such a context, the question is not how to deal with existing barriers but with the absence of barriers. One proposed solution is the implementation or tolerance of some new border barriers (against goods produced with child labor, for example). Another proposed solution is an enlargement of the object of multilateral negotiations to obtain an "upward" international harmonization of domestic policies and standards (upward meaning that the more demanding or ambitious standards would prevail). In a second set of cases, domestic policies are not eroded or endangered by market forces in the absence of some deliberate action to alter them, but they hamper or distort international exchanges. The barriers to trade resulting from domestic policies exist and the question is how to deal with them. Though the paper has relevance for questions of the first kind, the issues we focus on

are mainly those that pertain to the second question.[1] In practice, this means that we concentrate on the effects of the regulatory activity of governments on international trade.

When the problem is put in these terms, the analogy with internal barriers to trade is obvious. In this setting, border barriers between regions, states, provinces or localities are relatively unimportant.[2] Thus, as long as thinking on the matter was derived from international trade considerations and internal barriers to trade consequently conceived as border barriers, it was difficult to take very seriously the concerns that were sometimes expressed about these barriers. The change in emphasis in the international context has made the two settings more comparable than hitherto.[3] The regulatory activity of sub-central governments is significant everywhere and is as great as that of central governments in most federal countries. Thus the non-border barriers to trade, created by public policy, that are "domestic" in the sense that their real or nominal goal is unrelated to interjurisdictional trade constitute the main issue in both cases.

The implications of border barriers which are components of a trade policy are different from those of non-border barriers that are created sometimes as components of a trade policy but more often as by-products of domestic policies. One essential difference is that border barriers of the traditional protectionist variety harm first of all (with a few exceptions) the country which implements them, whereas non-border barriers resulting from useful regulation yield benefits to the country – or sub-central jurisdiction – concerned. With

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[1]The reverse is true of most chapters in Bhagwati and Hudec (1996) and in Ehrenberg (1994); see also Krugman (1997).

[2]At least in recent times and in industrial countries. The situation in the past or in the third world is another matter [see, for example, Faure (1961) for the situation which prevailed in 18th century France and which Turgot tried to change in 1774-76, and Govinda Rao (1993) for that which still does in India].

[3]This increased relevance of comparisons is reflected, to a still modest extent, both in the work devoted to barriers to trade and integration in a purely international context [see, for example, the discussion of interstate barriers in Esty (1994, chapter 5), Sykes (1995, pp. 102-108), and Farber and Hudec (1996, passim)] and in the work devoted to barriers to trade internal to a single country [see, for example, the discussion of GATT and of the European Union in Trebilcock and Schwanen (1995)].

regard to border barriers, a country "would serve its own interest by pursuing free trade regardless of what other countries do" (Krugman, 1997, p. 113) – a point familiar to students of economics. As a consequence, the discussion of barriers can be focused on a country's own interest and it can be argued that the adoption of free trade as a general principle is unproblematic. The question of why there apparently exists a need for multilateral bargaining over reciprocal "concessions" is a puzzle whose elucidation provides an interesting subject of thought to many political economists.[4] This puzzle does not exist for barriers that are by-products of domestic policies. There can be no presumption that a domestic policy which creates barriers to trade will as a rule harm the jurisdiction which implements it. The main issue is not self-inflicted damage but damage to others (or mutual damage), something that calls for collective solutions. No free trade principle, however, is readily available as a basis for these solutions.

Another set of differences of utmost importance in practice concerns the quantitative dimension of the two kinds of barriers. Measuring the trade effects of a tariff or of a quota is more or less straightforward. Assessing the trade side effects of a domestic policy is more difficult. The situation is further complicated by the fact that in the second case the assessment of the trade side effect is not sufficient; a measure of the non-trade benefits of the policy is also required. This poses problems that international trade economists, negotiators, and other officials are particularly ill equipped to address. Furthermore, the quantity of cases to consider is not of the same order of magnitude. Non-border barriers are created on a continuous basis by almost all the domestic activities of government, at all levels of jurisdiction. Each regulatory act of a national government adds, at least potentially, to the fragmentation of the international economy; the same is true, with regard to the domestic economy, of the regulatory acts of sub-central governments.

As a consequence of these characteristics of non-border barriers, the traditional approach to trade liberalization, based on reciprocal concessions in a context of negotiations, meets with serious obstacles. At the international level, it seems, a more rule-based and legal approach is required (see, for example, Pelkmans, 1995, p. 155). This has important implications on what can be achieved. However, and this is the main focus of this paper, within countries the existence of an additional actor, central governments, makes things quite

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[4]See, for example, Johnson (1965) and Hillman, Long and Moser (1995).

different. In other words, although in respect of the interjurisdictional trade consequences of their domestic activities, sub-central and national governments are more or less in the same position, the existence of a central government introduces a big difference in the way these consequences are dealt with. We discuss the nature of this difference in Section 3. The argument of that section is based on the assumption that relations of central and sub-central governments are competitive. We devote Section 2 to the implications of that assumption.

The European Union (EU) has a large role to play in the way we look at the relationship between domestic policies and free trade, especially since the EU's way of dealing with that relationship has changed profoundly under the so-called "new approach". Whether trade between member countries of the EU is more like international trade between sovereign countries or more akin to interjurisdictional trade within a federation is a question whose practical relevance is related to the question of whether what has been achieved in the EU can also be achieved in the international context. We turn our attention to the European Union in Section 4.

2. Intergovernmental competition in governmental systems

The governmental system of a country always includes many governments situated at different levels.[5] The relations between these various governments are horizontal and vertical. The first term refers to the interactions of governments inhabiting the same jurisdictional tier in the hierarchical structure of governmental systems, whereas the second pertains to the interactions between governments located at different tiers. It is now generally accepted that horizontal relations are competitive – there is, indeed, a small empirical literature (see, for example, Kenyon, 1991, Besley and Case, 1995 and Breton, 1996) that documents that reality. Whether vertical relations are also competitive is a question that has retained little of the attention of economists. As a consequence, discussions of intergovernmental competition are discussions of horizontal competition. Furthermore, why horizontal relations are competitive is not well understood. Most analyses of horizontal competition are based exclusively on interjurisdictional mobility, along the line that Charles Tiebout (1956) put at the center of his analysis, but often extended to incorporate the

[5]Although we pay no attention to them, it also includes many special authorities supplying specific services.

mobility of capital and of firms. This implies that intergovernmental competition as a whole is reduced to what is entailed by interjurisdictional mobility. Whatever views one may have regarding the potential and strength of horizontal mobility, it must be recognized that vertical mobility does not and cannot exist. Thus, because we consider vertical competition as essential to an understanding of the issues that concern us, rather than relying on mobility, we focus in what follows on a completely different approach to intergovernmental competition.

As explained in Salmon (1987), the theory of labor market tournaments, first suggested by Edward Lazear and Sherwin Rosen (1981), can be used, with some amendments, to analyze intergovernmental competition. The underlying mechanism is a simple one. Suppose that many citizens in a jurisdiction assess their own government's performance in respect of the provision of goods and services at given tax prices by comparing that performance to that of governments in other jurisdictions.[6] These assessments have an influence on the distribution of votes between incumbents and the opposition: dissatisfaction with the relative performance of the government increases the probability that a voter will vote for the opposition rather than for the incumbent. Governing politicians are uncertain about the details of these comparisons but know that their probability of winning the next election and remaining in power will increase if the government they are members of does better than governments in other jurisdictions in as many policy areas as possible.

Two conditions must be satisfied for vertical competition to emerge. First, the powers which are set down in constitutions and/or statutes and interpreted by the courts or are given meaning by accepted conventions, must not be so completely defined and precisely

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[6]Although, in our opinion, they do not give it the importance that it deserves, Inman and Rubinfeld (1997, p. 1232) are aware of the mechanism on which we focus when they write: "...the important difficulty of monitoring politicians' and regulators' activities is reduced for state and local governments because citizens can look across local and state boundaries to reveal – in ways not possible with centralized regulation – the more obvious effects of regulations harmful to domestic interests"..."For example, Pennsylvanians can discover the disadvantages they face in the purchase of wines and spirits because of regulated "state stores" by simply comparing Pennsylvania liquor prices and wine selection to those available in Delaware and New Jersey".

delineated as to altogether impede inroads and forays by governments at a jurisdictional tier into the supply domain of governments located at different tiers. Second, it must be that the utility that citizens derive from the goods and services (including regulation and redistribution) that a government provides is not dominated by other considerations concerning that government and its relations with other governments. These two conditions are generally satisfied in the real world. Enough at least to have provoked Frank Easterbrook (1983, p. 41, note 40) to remark, regarding the United States, that "the time in which state and federal powers of regulation were mutually exclusive is long since over."

Together the two conditions imply that senior and junior governments will provide similar or comparable services, and that office-holders in the government which is judged by citizens to be the more efficient supplier will increase their probability of getting the vote of these citizens. In other words, the tournament mechanism extends to vertical competition. The expectation of that effect on votes leads governing politicians at each jurisdictional level to observe the performance of governments inhabiting other tiers. If they come to the conclusion that they can do better than these governments, they will act on that conviction and invade the supply domains of these governments. In turn, the expectation that its domain may be invaded in this way is an inducement for a government to do as well as possible as a supplier of goods and services.[7]

Under the assumption that there are no interjurisdictional spillovers, we can say that horizontal competition is efficiency-enhancing in the sense that it induces each junior

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[7]We note that whereas vertical competition is usually accompanied by what, looking at it from the outside, appears to be duplication and overlap of responsibilities, in reality, as in the marketplace, the competition is over near substitutes, so that the duplication and the overlap is more apparent than real. What looks like duplication and overlap are manifestations of actual vertical competition. But duplication and overlap are also heralds of potential vertical competition. In other words, they signal the ability and willingness of senior governments to become suppliers of goods and services that are currently in the supply domain of junior governments should such inroads and forays increase the senior governments' expected vote. Conversely, duplication and overlap signal the capacity and willingness of junior governments to become providers of goods and services whose supply has hitherto been restricted to senior governments should that be to their advantage.

government to move closer to its policy production frontier and to respond as well as possible to the demands of its citizens. We can also say that horizontal competition is complemented in this role by vertical competition. The two forms of competition provide a basis for a presumption that junior governments are efficient, a presumption that plays an important role in what follows. In addition, vertical competition induces the central government itself to move to its production frontier and to respond to the demands of voters.[8] It is not possible, however, to disregard interjurisdictional spillovers. Thus the presumption that as a consequence of horizontal and vertical competition junior governments are efficient means no more, at this juncture, than that they are efficient from a purely "domestic" point of view. To deal with interjurisdictional spillovers, vertical competition must be examined in a second more specific and perhaps more essential role.

To introduce this second role, we must start from the obvious observation that office-holders in a lower-level jurisdiction are not directly concerned with the opinions or feelings of voters in other jurisdictions situated at the same level. This is a strong inducement for these office-holders to neglect the effects of their policies on other jurisdictions. Politicians in office in the senior government are in a different position. Their chances of winning the next election depend on assessments made by voters in all lower-level jurisdictions.[9] When considering whether it is worthwhile to invade the policy domain of a junior government, the politicians of the senior government will balance the electoral support that they might gain (or lose) in this government's jurisdiction against the support that they could lose (or gain) in the other jurisdictions at the same level. We now assume that politicians in lower-level jurisdictions understand this and act on the basis of the expectations they form about the response of the senior government to the way they shape their government's policies. Because, typically, these politicians do not wish the senior government to invade what they

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[8]Efficiency incentives are also provided by horizontal performance competition among central governments at the international level (see Salmon, 1987).

[9]We assume that the perceptions and behavior of candidates are governed by probabilistic voting. In other words, we assume that, as perceived by the candidates themselves, the probability that any voter will vote for a given candidate is a continuous function of this voter's expectations about the candidate's policies. What is important for our purpose is that, under that assumption, all voters count – not only the median voter.

see as their own territory, they are led, under the threat of entry, to take spillovers into account. At the limit, all spillovers are internalized. The presumption must be that all governments at each tier and the governmental system as a whole are efficient.

In the foregoing discussion, the process that yields an internalization of spillovers is based on a cost and benefit calculation made by each junior government acting in isolation under what it considers to be the threat of entry into its policy arena by the central government. The model of barriers to trade we present in the next section follows that line of reasoning. However, two other types of response to the prospect of spillovers are relevant. One is negotiation between the junior government whose policy is the source of these spillovers and other junior governments. Another is effective entry by the central government. In both cases, the whole setting in which the junior government operates is modified. In the new equilibrium, the policies of the other junior governments have changed – for instance they have been "harmonized" – or the central government is now pursuing for the whole country the policy that the junior government was originally planning to pursue in its own jurisdiction (the latter's policy has been "preempted"). In fact, the fundamentally competitive nature of the relationship between levels of government does not preclude that, in some circumstances or on some points, junior governments do wish their endeavors to be preempted by centralized policies. The model of the next section cannot deal with systemic responses of that kind. However, in the case of a central government preempting a junior government's policies, the spirit of our analysis remains. How? If the governmental system is really competitive and if it can be assumed that it eventually settles down at a new equilibrium (*i.e.*, at a state at which the actions of each actor are set and compatible), then, at this new equilibrium, spillovers must have been internalized, otherwise the vertical competition mechanism described above tells us that the central government would act to seize the ensuing opportunity, which would contradict the assumption that an equilibrium had been reached.[10]

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[10]There is no problem of revelation of the magnitude of spillovers arising in the setting assumed here because the ultimate criterion of the existence of equilibrium is the central government being satisfied that it cannot increase electoral support by acting. As usual in the theoretical context of probabilistic voting, government is assumed to know the ideal points of voters in the issue space (Coughlin, 1992).

Though the perspective is different, our argument is similar to one repeatedly made by the Supreme Court of the United States in the context of its anti-trust "state-action" doctrine. That doctrine, enunciated by the Court in 1943 (*Parker v. Brown*) and elaborated later on, exempts the anti-competitive actions of the states from anti-trust laws (the Sherman Act in particular) in spite of the so-called "supremacy clause" of the U.S. Constitution (which says that in case of conflict the federal law should prevail) on the sole condition that these actions follow from clearly articulated decisions of state governments. In their very thorough study of the doctrine, Robert Inman and Daniel Rubinfeld (1997) argue that the doctrine's only weakness is its neglect of the interstate spillover effects of the anti-competitive policies of states.[11] If it were not for these effects, they agree with the Court that state governments should be trusted to know what they are doing.

The matter is particularly interesting when one moves down one tier and considers the anti-competitive policies of local government. The Supreme Court extends its doctrine to this tier only when the regulatory autonomy of a local government in the area concerned can be presumed to be the result of an avowed policy of the state government. When this is the case, the Court's benevolence also applies, explicitly this time, to the spillover effects of the local government's policies. The Court's reasoning, approved by Inman and Rubinfeld, is – in our words – that the democratic governmental system of the state as a whole can be trusted to take care of spillovers associated with municipal policies.[12] Obviously, the same reasoning could be moved up one tier and justify the observed neglect of interstate spillovers by the Supreme Court. Inman and Rubinfeld, however, explicitly deny the U.S. Congress the capacity or willingness to act in regard of the states as the states act in regard of local

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[11] *Palmer v. Brown* was about a regulation of raisin prices in California that had caused a rise in the price of raisin in the whole country. To this day this case remains the most clear-cut illustration of an anti-competitive act on the part of a state government that also has important effects on non-residents. Other judicial cases concern for instance regulation of cable television, regulation of attorneys, or even rent-control (see Inman and Rubinfeld, 1997, notes 85 and 92 on pages 1234 and 1239, respectively).

[12] Inman and Rubinfeld (1997, p.1275) observe that the Court "did make clear that if the state authorizes a regulatory activity by a local government, that regulation is immune from the anti-trust laws even if it generates substantial spillovers across the jurisdiction's boundaries".

government. According to them, "although Congress might provide protection to affected out-of-state residents without judicial prodding, current analyses of congressional policymaking suggest this is unlikely. The incentives of Congress are to favor local constituents. One effective way to favor them is to grant a regulation with monopoly spillovers to particular industries that are economically important to a state or congressional district" (p. 1276). In other words, the authors see a fundamental difference between the way democratic politics operates at the level of the states and the way it does at the level of the federal government. We find that puzzling and difficult to accept. As a consequence we do not concur with their – and admittedly other commentators' – critical assessment of the way the Court's anti-trust state-action doctrine deals with interstate spillovers.

Why then is the Court's solution different (much less favorable to the autonomy of the states) when spillovers concern interstate trade and fall under the so-called "dormant" or "negative" Commerce Clause of the U.S. Constitution? This question is a very difficult one. Many legal scholars consider the doctrine based on the dormant commerce clause as being quite confused (cf. Sykes, 1995, pp. 104-106; Farber and Hudec, 1996, pp. 65-67; Revesz, 1996, p. 2398). Let us note, however, that the clause played an essential role in the creation of a U.S. internal market at a time when barriers to trade were mostly of the "border" variety and were typically openly protectionist. It should also be stressed that the dormant commerce clause becomes inapplicable as soon as federal regulation is present and that Congress can wave it for the purpose of authorizing specific state regulations. Thus, although it might be argued, as some authors do, that the clause duplicates a capacity that should be exercised only by a political branch of government, it is probably a speedy or cost-efficient way of solving the most clear-cut cases. However, as we shall see with a reference to international adjudication which also applies to judicial possibilities within countries, in the more delicate cases in which the government under scrutiny pursues a defensible domestic objective, no judicial means can replace what competitive politics can achieve.

3. A Model

As noted in Section 1, in international settings, the trade effects of domestic policies are, as a general practice, addressed by means of agreed upon rules rather than by means of case-by-case negotiations. Depending on the exact institutional setting, these rules may vary. In general, however, they include things such as national treatment of, or non-discrimination

against, foreign suppliers; 'sham' principles (i.e. no disguised barriers to trade); notice, comment and publication requirements; generality requirements; presumptions in favor of international standards; mutual acceptance or recognition; etc. Alan Sykes (1995, p. 118) shows, convincingly in our opinion, that more or less all rules can be derived from a single principle which is the "*least-restrictive means principle* – the requirement that policy objectives be achieved in the manner that is least restrictive of free trade and open markets."

This principle seems benign. It leaves to governments the freedom to pursue the domestic objectives they wish and interferes only with the instruments that they employ for meeting these objectives. It dodges, however, the issue of a proper balancing of domestic benefits against trade-distortion costs. Only in cases in which domestic benefits are clearly negligible and trade distortions substantial, that is in cases of "gross disproportion" between the two, is the least-restrictive means principle complemented by balancing – with a third party, usually a panel, allowed to formulate a negative judgment on the domestic policy.

The matter is different in federal contexts. Like the central governments of countries, sub-central governments implement policies in the pursuit of "domestic" (intrajurisdictional) objectives which at the same time have consequences on interjurisdictional trade that are costly for their own as well as for other jurisdictions. However, in the case of subcentral governments, a balancing of the domestic benefits of these policies against their costly effects on trade is the rule rather than the exception. This essential fact is not always perceived because the balancing is a tacit and automatic effect of competition between governments in general and of vertical intergovernmental competition in particular, as analyzed in Section 2. If on balance, costs exceed benefits (from the perspective of the whole country), the central government can always intervene, namely 'preempt' the subcentral government's regulations, at the limit without having to justify itself. For example, in the United States, the federal government, using the Food, Drug and Cosmetic Act, preempts state drug regulation and using the Ports and Waterways Safety Act preempts more stringent state standards (see Sykes, 1995, p. 103). However, preemption does not need to take place for it to have an effect, and in fact the model that follows assumes it to remain potential. What counts is that the threat of preemption provides a powerful incentive for a junior

government to seek the right balance, from the perspective of the whole country, between benefits and costs.[13]

If we compare a system in which domestic policies are submitted to a least restrictive means principle and a system in which these policies are submitted to a proper balancing of benefits and costs ('proper' here means that spillover effects on the welfare of other jurisdictions are taken into account), it seems obvious that the latter (which authorizes the assessment of both objectives and instruments) will always be more constraining, less tolerant of impediments to trade, than the former (in which objectives may not be questioned). In the remainder of this section, we take objection to this view. We argue that it is often the case that a domestically oriented policy would be found acceptable under proper balancing, whereas it would not under a less-restrictive means regime. As a consequence, we can expect to find within countries, and especially within federal countries, impediments to interregional trade that are currently disallowed in the context of international trade.

For the purpose of our demonstration, we will compare three polar cases: as the benchmark, unconstrained policy-making by the government of a jurisdiction; policy-making by the same government under a least-restrictive means rule; and policy-making by the same government or by a higher authority under a mechanism that performs a proper balancing of benefits and costs. We interpret the least-restrictive means rule as one which compels governments to choose policy instruments that, for any level of fulfillment of a domestic objective, minimize the associated negative effects on international trade. The very fact that governments have to be compelled to abide by the principle is *prima facie* evidence that following the rules is costly. The neglect of these costs often appears to be a consequence of an unwitting disregard of the definition of the least-restrictive means principle itself which is in terms of a constant level of policy achievement. For example, to achieve the same level of consumer protection by labeling that can be obtained through a partial ban of a product would require a volume of labeling that would be very costly indeed. Usually a reduction in the level of consumer protection is implicitly accepted. In what follows, we assume that

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[13] As we noted at the end of Section 2 when we considered the case of the dormant clause of the US constitution, many internal barriers to trade are handled by the courts. These typically apply a least-restrictive means principle and only occasionally some balancing test.

complying with the least-restrictive means principle always entails the consumption of some domestic resource.

The benchmark: unconstrained policy-making

Assume that the level of fulfillment of a domestic policy objective (say, the safety of the consumption of a particular product) can be expressed by a continuous variable Q. To achieve any level of Q two "inputs" are needed. A first one is the consumption of a domestic resource. We call it R. The second input, which we call T (for trade), is the benefit of international – more generally, interjurisdictional – trade foregone. In turn, this second input has two components. One concerns the country itself (in a federal context, the junior jurisdiction itself). We call it N (for national). It is the self-inflicted damage to the jurisdiction caused by trade impediments or distortions associated with the pursuit of Q. The second component concerns the 'rest of the world' (to be understood literally if the context is international and as the rest of the country if the context is federal). We call it S (for spillover). To simplify, we assume that S/N is equal to a constant λ, and thus that $T = N + S = (1 + \lambda) N$. We assume that R, T, N, and S are continuous variables and are measured in dollars.

We therefore have a function $Q = Q(R, T)$ in which R and T are, up to a point, substitutes.[14] As should become clear as we proceed, 'up to a point' means two things: first, for any level of Q, there is a limit to the possibility of substitution between R and T (or N); second, at higher levels of Q, substitution possibilities may vanish altogether.

[Figure 1 goes about here]

In Figure 1, we portray cost minimization by a government pursuing a given level of achievement i of the particular policy objective Q. In the absence of any constraint, that government will neglect spillovers S and base its decision on R and N alone as necessary

[14]Given that T and N are linearly related, we could and will, in what follows, sometimes replace T by N in the Q -relationship.

inputs. For that government, the relevant iso-achievement curve is, in Figure 1, shown as Q_i^d.[15] When spillovers are taken into account – what is known in the literature as the "cosmopolitan perspective" – the appropriate iso-achievement curve is instead the curve labeled Q_i^w. The vertical distance between the two curves is therefore equal to S and hence proportional to N. In Figure 1, iso-cost curves are straight lines of slope -1. Cost minimization, absent the cosmopolitan perspective, is at A so that costs are equal to C_i^{unc} ("unc" standing for "unconstrained") on the vertical axis.[16]

[Figure 2 goes about here]

When Q is allowed to vary, the minimum cost function is $C^{unc}(Q)$ as shown in Figure 2. In that figure it is assumed that the function is convex, but it could be linear. Assuming that the marginal value the government attaches to the policy objective Q is decreasing, $V(Q)$, the curve representing the value attached to Q, is concave. The optimum for the government is at Q^{unc} where marginal cost and marginal value are equal. Obviously, Q will not be pursued whenever the cost curve lies completely above the value curve.

Least-restrictive means principle

We assume that after a point the iso-achievement curves become horizontal because we take it as evident that trade distortions cannot be eliminated completely by incurring higher domestic costs. In Figure 1, it is at B and B' that Q_i^d and Q_i^w, respectively, become

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[15]Recall that the curve refers to the achievement by the government of a particular policy objective Q.

[16] From the "cosmopolitan" perspective, the cost entailed by the equilibrium solution at A would be $C_i^{A'}$. However, because cost minimization is not bound by international or federal concerns governing spillovers, $C_i^{A'}$ is irrelevant to decision-making by the government. It only gives an idea of the problem to be resolved.

horizontal. B and B' correspond to the same achievement level i of Q and the same mix of inputs. This mix is the 'least-restrictive means' required to produce Q_i. It minimizes the effects on trade of the achievement of Q_i.[17] However, the total cost to the government, shown on the vertical axis, is now C_i^{lrm} (*lrm* standing for least restrictive means). It is necessarily higher than C_i^{unc}.[18]

When Q is allowed to vary and when the government adopts the least-restrictive means principle to achieve Q, the cost function is $C^{lrm}(Q)$. Since for any value of Q, the cost will be higher than when the government minimizes costs without constraint, in Figure 2 curve $C^{lrm}(Q)$ lies above curve $C^{unc}(Q)$. This moves the optimum from Q^{unc} to Q^{lrm}.[19] In other words, *a government compelled to follow a least-restrictive means principle is induced to reduce Q*. Indeed, it may well happen that curve $C^{lrm}(Q)$ lies above curve $V(Q)$ whereas curve $C^{unc}(Q)$ does not. This means that *when compelled to follow a least restrictive means principle, a government may well decide to give up the pursuit of Q altogether.*

Balancing benefits against total costs

If decision-makers take spillovers into account, the relevant curve for a given level of Q is no longer Q_i^d but Q_i^w and the relevant cost C^w is the sum of R and T. In Figure 1, minimum cost is at point C, corresponding on the vertical axis to C_i^{bal} (for balancing). C_i^{bal} is necessarily higher than C_i^{unc}. The consequence, as portrayed in Figure 2, is that the

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[17]It minimizes all the effects on trade, whether viewed as N, as T, or as S; for instance, S is reduced from AA' to BB'.

[18]From a cosmopolitan perspective, the relevant total cost is $C_i^{B'}$. Depending on the curvature of the iso-achievement curves, that cost may be higher or lower than $C_i^{A'}$. When $C_i^{B'} > C_i^{A'}$, as in Figure 1, world welfare, as defined by the cosmopolitan perspective, would be reduced by the imposition of the least-restrictive means principle if Q_i were forced to remain constant. That will, however, not be the case as explained in the text.

[19]We assume, of course, that for all values of Q the slope of curve $C^{lrm}(Q)$ is higher than the slope of curve $C^{unc}(Q)$.

cost curve $C^{bal}(Q)$, derived from the minimization of C^w for all values of Q, necessarily lies above the cost curve $C^{unc}(Q)$. The optimum now moves from Q^{unc} to Q^{bal}.[20] *When submitted to a proper balancing of the benefits and costs of the policy, governments reduce the magnitude of implementation compared to what they would do when unconstrained. They may even decide not to pursue* Q: this will happen if curve $C^{bal}(Q)$ lies completely above curve $V(Q)$.

The least-restrictive means principle and the balancing of total costs and benefits compared

As Figures 1 and 2 are drawn, total cost is higher when the government follows a least-restrictive means principle than when it balances total costs and benefits and internalizes S: in Figure 1, where the level of Q is held constant, C_i^{lrm} is higher than C_i^{bal} and, in Figure 2, where Q is allowed to vary, curve $C^{lrm}(Q)$ lies above curve $C^{bal}(Q)$. As a consequence Q^{lrm} is smaller than Q^{bal}: there is a larger sacrifice of the domestic policy objective Q under the least-restrictive means principle than under the balancing of benefits against costs principle. It may even happen that curve $C^{lrm}(Q)$ lies completely above curve $V(Q)$ while curve $C^{bal}(Q)$ does not. If that is the case, Q will not be pursued at all under a least-restrictive means rule whereas it will be pursued under a proper balancing of costs (including spillovers) and benefits. This proves what was asserted earlier that the least-restrictive means regime is not always more tolerant of trade-distorting policies than is the proper balancing one.

Of course, the reverse can also be true. To see this, it is sufficient to imagine an increase in spillovers, everything else remaining constant. In Figure 1, such an increase would be reflected by an outward shift of curve Q_i^w. This would not change the levels of Q pursued under the benchmark and the least-restrictive means regimes.[21] However, the

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[20]We make the same assumption as we did in the previous footnote.

[21]As can be seen in Figure 1, an increase in S will not affect Q_i^d and neither, consequently, points A and B which are attached to Q_i^d; it will not either affect costs C_i^{unc} and C_i^{lrm}

increase in spillovers will shift point C_i^{bal} upwards and if S is sufficiently large, shift it beyond C_i^{lrm}. As a consequence, in Figure 2 $C^{bal}(Q)$ would lie above $C^{lrm}(Q)$, and Q^{bal} be smaller than Q^{lrm}. It might be the case once more that curve $C^{bal}(Q)$ will lie above curve $V(Q)$, and that Q will not be pursued. *Thus, ceteris paribus, the larger the spillovers the greater the likelihood that proper balancing will be more restrictive than least restrictive means.*

As can be seen from Figure 1 though, without changing S, changing the shape of Q_i^d and Q_i^w in such a way that B is now below line CC_i^{bal} also makes $C_i^{bal} > C_i^{lrm}$. This can reflect two different phenomena, depending on whether B is close to A or far from it. In the first case, especially if S is small, the least restrictive means solution is not very different from the benchmark solution and its adoption entails no large increase in R, that is, in the non-trade cost of the domestic policy. In the second case, the effect on R, that is, the entailed increase in the non-trade cost of the domestic policy is larger but, in terms of total cost, it is more than compensated by a large diminution of N (those ill-effects on trade the government is concerned with). A formulation which covers the two cases goes as follows: *ceteris paribus, the least restrictive means principle is more likely to be more restrictive than proper balancing when it entails a large increase in the non-trade cost of the policy unmatched by a large decrease in its ill-effects on trade.*[22]

If we assume, as is not unreasonable, that international trade organizations are concerned with the total effects on trade T or with the trade effects on other countries S and not with the benefits of domestic policies Q, it is then imperative to compare the effects of the two regimes on T or S alone. As was the case earlier, these effects are ambiguous. It is true that for a *given level* of Q, as is clear from Figure 1, T will always be smaller under least

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which are derived from A and B. This implies that in Figure 2, cost curves $C^{unc}(Q)$ and $C^{lrm}(Q)$ will not be affected either and, therefore, neither will points Q^{unc} and Q^{lrm}.

[22] In other words, the least-restrictive means principle bites more, that is, has the larger restrictive effect on Q, when it is particularly cost-inefficient (for instance a large non-trade cost for a small diminution of spillover). On reflection, this is perfectly obvious.

restrictive means than under proper balancing (the ordinate of B' is smaller than that of C) and so will be S (BB' will always be smaller than CC'). If a government left the level of Q unchanged, the least-restrictive means principle would be more efficient in reducing the distortive trade effects of Q than would trade balancing. However, Q is endogenous which means that the government will necessarily reduce Q under both regimes. We have seen earlier that it is possible for Q^{bal} to be smaller than Q^{lrm}. This means that there can be a larger reduction in Q under proper balancing than under least-restrictive means. *The difference in the reduction in Q may compensate for the fact that, given any level of Q, the least-restrictive means principle reduces T and S more than proper balancing does.* It may even be the case that T and S would be completely eliminated under proper balancing whereas they would not be under a least-restrictive means rule.[23]

4. The European experience

As noted at the end of Section 2, the foregoing model does not purport to be a complete description of the way the effects of domestic policies on interjurisdictional trade are dealt with. It corresponds to what some authors (Nicolaïdis, 1995, p. 142) call a setting of "unilateral assessments". In its "proper balancing" part, it most directly applies to situations in which a new regulatory action is contemplated in one jurisdiction and the threat of a reaction by the "rest of the world" constrains the scope and modalities of the action, *the regulatory set-up in the rest of the world in fact remaining constant.* The reason for this condition is that if the regulatory set-up in the rest of the world was to change as a response to the junior government's action this would upset the parameters and pre-suppositions underlying the model. In particular, if what we called the "domestic objective" were now met by uniform provisions at the level of the whole federal or international system, preempting or replacing the one adopted or contemplated in the particular jurisdiction under discussion, this would eliminate the interjurisdictional spillover effects on trade considered in the model.

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[23]This follows from the fact that curve $C^{bal}(Q)$ could lie above curve $V(Q)$ and thus Q^{bal} be equal to zero, while curve $C^{lrm}(Q)$ would lie below curve $V(Q)$ and thus Q^{lrm} be positive.

This harmonization solution to the problem created by trade spillovers is widespread both in international and in federal settings. As noted earlier, there is a difference between the forms the solution takes in the two settings. In international settings, harmonization is sought by multilateral negotiations which run into various social dilemmas and cannot be presumed to lead to an equilibrium which is also an optimum. Such a presumption, however, is not illegitimate in an individual country when the preemption by a central government takes place in a context of vertical competition. As to interstate or interprovincial negotiations within federations, they can also be presumed to lead to an optimum when these negotiations take place in the shadow, or under the threat, of preemption by the federal government.[24]

The European Community/Union is an interesting case from this perspective. Within an evolution which is not completely deprived of continuity, it will be nonetheless convenient to distinguish three successive states of affairs. The first corresponds to the legitimization of a number of principles whose importance was to be felt only later. In other words, these principles would not have been accepted as easily if their exact consequences had been foreseen. The first of these principle is central to the treaty of Rome itself: the obligation for member states to dismantle all barriers to trade or more generally all obstacles to mobility between themselves. What is interesting is that the courts, both at the European level and in the member countries gave the principle a legal force that had not been anticipated at the outset and that is uncommon in international treaties (whose national impact varies according to the constitutional set-up of each country party to the treaty). As noted by several authors (e.g., Majone, 1996), the principle of freedom of trade and movement in the Treaty has a constitutional status which is comparable to that of the Commerce Clause in the United States Constitution. The judicial interpretation of this status as implying the supremacy of European law over national law in the domains in which the Treaty applies, and the "direct effect" of a large component of European law in national proceedings created at the systemic level a hierarchy of laws of the kind that can be observed

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[24] Which is not the case of the recent Agreement on Internal Trade in Canada (see Trebilcock, and Schwanen, 1995)

only in federal systems (Weatherill, 1995, chapter 6). However, this was acceptable to the member states because of two factors: they could rely on their veto power to block any new legislation or extension of Community competence they disagreed with – lawmaking remained intergovernmental – and the courts' interpretation of existing laws showed much restraint.[25]

The second state of affairs was alike the first with one single, albeit far-reaching, difference. The courts, and especially the European Court of Justice, adopted, without encountering any serious opposition, an increasingly aggressive or "activist" interpretation not only of the supremacy but also of the scope of European rules. The "mutual recognition" principle, spelled out most notoriously in the *Cassis de Dijon* ruling (1979), was a major step in the establishment of the new state of affairs, labeled "dualistic" by Joseph Weiler (1981). As a consequence of the unanimity voting rule, the capacity to make new laws was very limited at the European level, and thus mainly localized at the level of the individual member states; but, as a consequence of the increasingly creative interpretation of the Treaty's liberalizing requirements by the European Court of Justice, a rapidly increasing proportion of the regulations enacted by the member states was censured or curtailed by the Court, which imposed one variant or another of the least-restrictive means principle.

From a perspective of global distrust of government's interventions in the economy, this state of affairs could be deemed quite satisfactory. It resembles a system of governance analyzed with great favor by Barry Weingast (1993) under the name of "market-preserving federalism". Weingast, who attributes the success of the US economy in the nineteenth century to the adoption of this system, constructs its two specific characteristics as being "first, that the authority to regulate markets is not vested with the highest political government in the hierarchy; and, second, that the lower governments are prevented from

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[25] As observed by Stephen Weatherill (1995, p. 210), "the far-reaching principles of supremacy and direct effect were developed by the European Court in a climate that was propitious to their absorption at national level, because the areas in which those principles applied were determined by all the Members States possessing a veto".

using their regulatory authority to erect trade barriers against the goods and services from other political units". As noted before, to eliminate "border barriers" impeding interstate trade, the courts, under the negative Commerce Clause of the US constitution, were particularly well suited. However, when trade barriers are mostly of the non-border variety, namely the kind of barriers that have retained our attention and which are the most relevant in the current context, Weingast's two requirements are incompatible except under drastically down-sized government.[26] In the European case, member countries (Thatcherite Britain included) could not durably accept a deregulation process of the order of magnitude that a dualistic system of the kind described, from different perspectives, by Weiler and by Weingast, could well have entailed if it had been allowed to last.[27]

The third state of affairs, brought about by the Single Act of 1986, has little to do with the dualistic system described by Weiler and others. The crucial difference is the replacement of unanimity by qualified majority as the normal voting procedure in the Council of Ministers. As a consequence, the dominant regulatory or norm-making capacity is no more to be found in the member states but rather in the Commission and the Council of Ministers in

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[26] For a generalized criticism of Weingast's market-preserving federalism, see Rodden and Rose-Ackerman (1997).

[27] That such system is hardly a realistic alternative in the modern world also finds an illustration in the Reagan administration, whose "response to the growth of state regulatory activity was to propose preemptive regulations in such areas as nuclear power, trucking, state workfare, drug labeling, products liability, coastal zone management, taxicab licensing, affirmative action, the minimum drinking age, and the transport of hazardous waste. According to one study, ninety-one explicit federal preemption statutes were enacted during the two Reagan administrations. These statutes represented 25 percent of all federal preemption laws enacted since the founding of the republic. This seems an odd outcome to emerge from an administration supposedly committed to the "new federalism" of increased state authority" (Rose-Ackerman, 1991, p. 163).

Brussels.[28] This has led to preemption by the center becoming perhaps the main way to deal with interjurisdictional barriers to trade in Europe.[29] As stressed in particular by David Vogel (1995), this feature also contributes to make the experience of the European Union very different from what can be expected from any international agreement.[30]

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[28] As Majone (1996, p. 57) observes: "in 1991, the European authorities in Brussels issued 1,564 directives and regulations as against 1,417 pieces of legislation (laws, ordinances, decrees) issued by Paris, so that by now the Community introduces into the corpus of French Law more rules than the national authorities themselves". Also: "Today, European environmental regulation includes more than two hundred pieces of legislation, and in many member states the corpus of environmental law of Community origin outweighs that of purely domestic origin." Another observation, contradicting a basic premise of the pessimistic interpretations proposed by Scharpf (1996), is that " while the first directives were for the most part concerned with *product* regulation, and hence could be justified by the need to prevent that national standards would create non-tariff barriers to the free movement of goods, later directives increasingly stressed *process* regulation (emission and ambient quality standards, regulation of waste disposal and of land use, protection of fauna and flora, environmental impact assessments), and thus aimed explicitly at environmental rather than free-trade objectives". However, as explained by Vogel (1995), environmental objectives at the collective level typically become relevant as a condition for pursuing free-trade objectives (i.e., for the most environment-minded member countries to support free trade).

[29]In spite of the increasing decision-making capacity provided the Council by the new voting rules, the European Court, however, remains important (Weatherill, 1995; Cooter and Ginsburg, 1998).

[30] Thus, Vogel (1995, p. 53) writes: "The European Union not only has the authority to strike down national regulations that interfere with trade; all international trade agreements, by definition, subject some national laws to international review. What distinguishes the EU from other international institutions is that it also has the power to impose regulations on its member states. Thus, unlike the GATT, which only has the authority to engage in negative harmonization (that is, to instruct governments *not* to enforce laws which conflict with their obligations under the General Agreement), the EU also has the legal and political capacity to engage in positive harmonization – to enact regulations that governments *must* enforce". As

At the same time, it must be observed that neither actual preemption nor the threat of it are subject, at the present stage of European integration, to political calculations of the kind that underlies governmental competition in an individual country, as analyzed in Section 2. Thus there is no mechanism in the European Union case that justifies a presumption of efficient internalization of spillovers along the lines developed in that section. Harmonization or preemption, in the European case, might even be interpreted as being often a means for the member-state governments, or for the most inefficient among them, to reduce horizontal governmental competition – another means to the same end being, albeit only potentially, what would be an unbalanced attention to interjurisdictional trade spillovers on the part of the judiciary. In both cases, the trade-off between competition in markets and competition in government or politics would be modified in favor of the first, which is not necessarily advisable (see also Trebilcock and Howse, 1998).[31]

5. Conclusion

We have argued that in a world in which barriers to trade at all levels - international and internal - are mostly a by-product of the implementation by governments of different regulatory policies to deal with "domestic" or "local" problems such as environmental degradation, health, and labor standards, the mechanisms that are set in motion by the operation of competition among the governments inhabiting the different jurisdictional tiers

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we noted earlier, however, the supremacy and direct effect principles that guide European jurisprudence make the enforcement of the obligations contracted by the member states in the European Treaties quite different already from what obtains in all the other "international trade agreements".

[31] The political objectives of the European "construction" should be kept in mind, though. Liberalization of the internal market is one of the few means available to the European Union, still so weak in many respects, financial in particular, to exert an immediate and substantial influence on the economy and to build-up a strong power (both political and judicial) at the center. Here, there is something of an analogy with the build-up of the federal level in the United-States in the nineteenth century (see also Majone, 1996).

of federal countries lead to outcomes that are different from those generated by the 'agreed-upon' rules that govern the relations of national governments with each other in matters of international trade.

In a formal model, we have compared two ways of dealing with the external damages that are consequent on the pursuit of beneficial domestic regulatory policies by assuming that at the international level the methods used can be synthesized by what is known as the least-restrictive means principle, while in the context of competitive federalism the methods lead to what we have called a proper balancing of benefits and costs of domestic policies, including the spillover costs inflicted on others. With the help of this model, we have shown that one or the other of the two sets of methods could be more restrictive, depending on the magnitude of spillovers and the relation between the instrument used and the achievement of the domestic objective. We have also discussed the case of the European Union, which falls between these two polar extremes.

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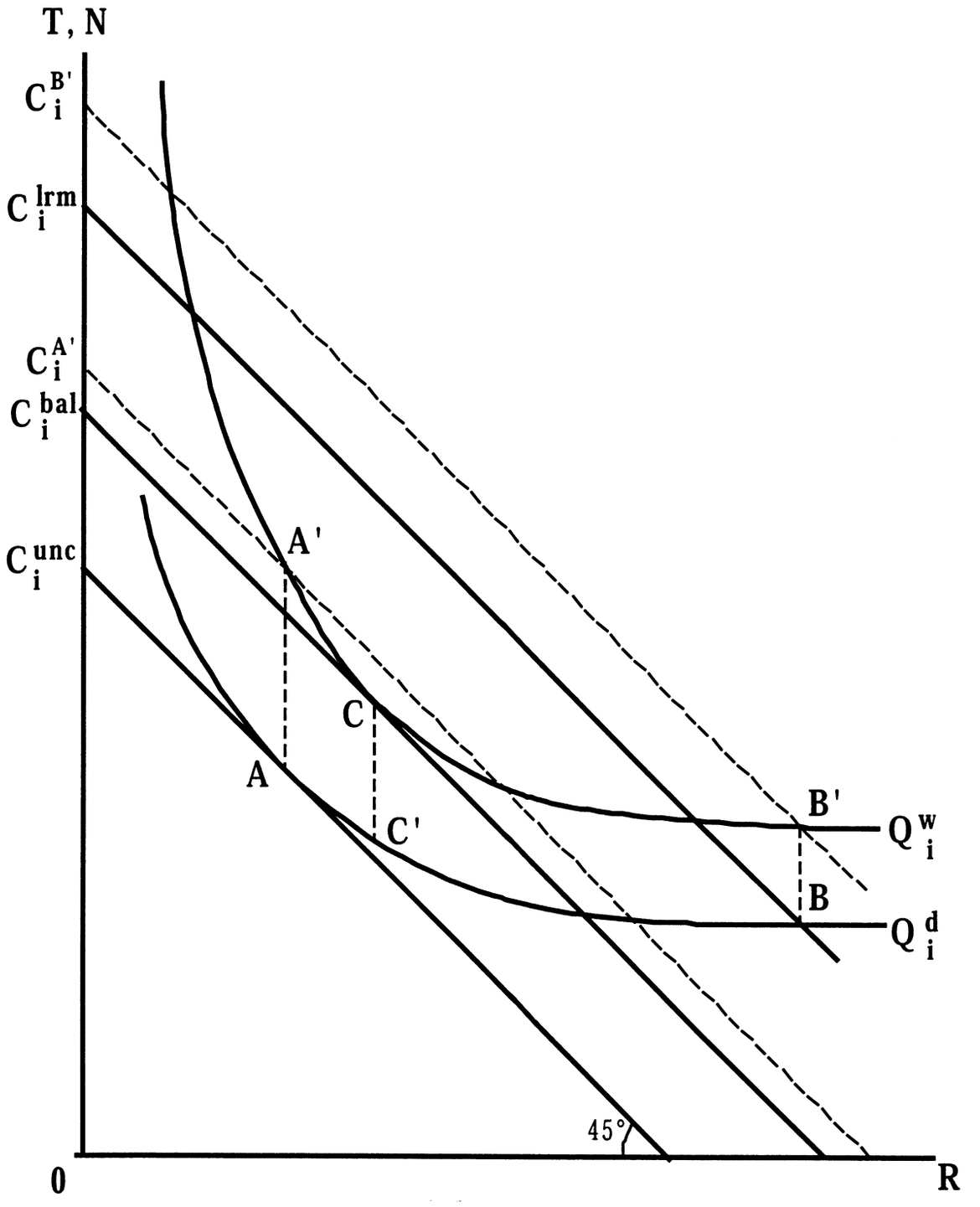

Figure 1

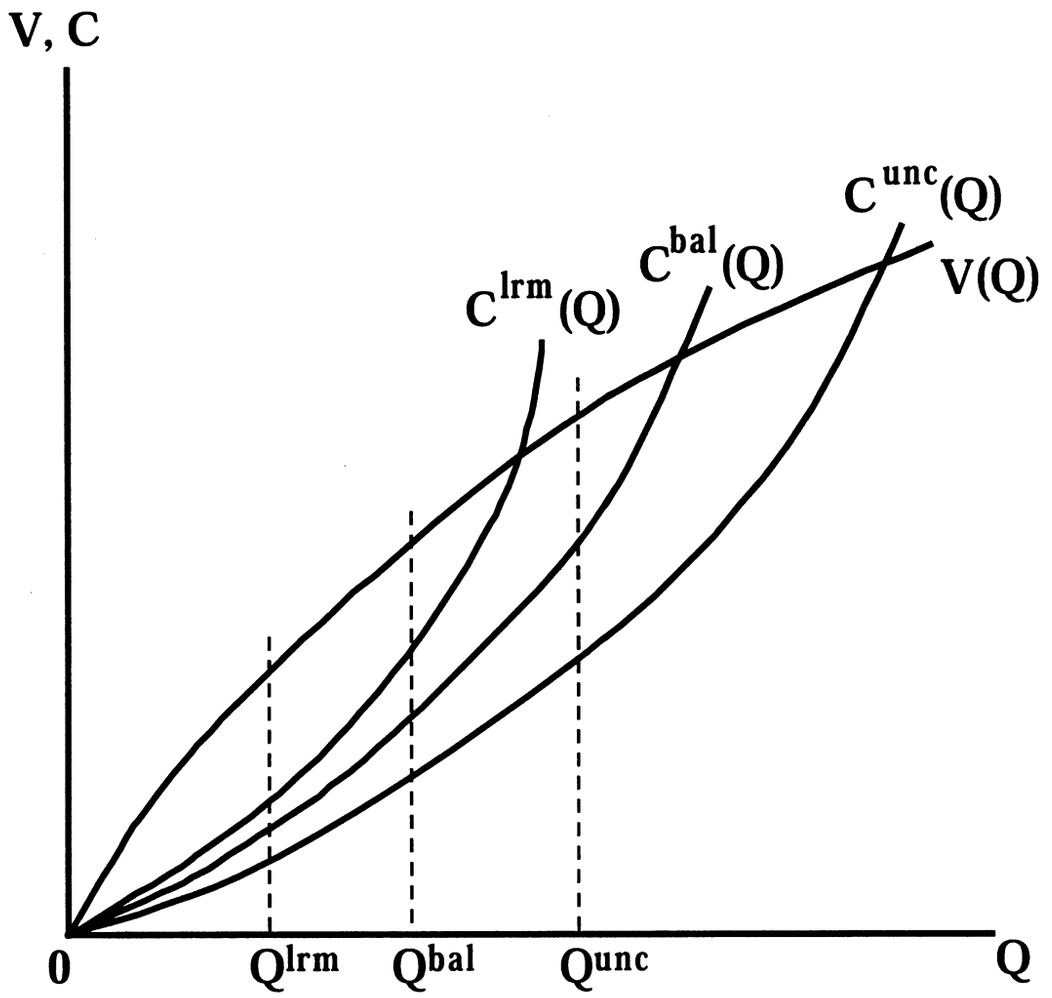

Figure 2