The Least Restrictive Means

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Least restrictive means requirements and related legal principles, which require regulators to pursue regulatory objectives in the manner that is "least restrictive" of other societal values, pervade national and international legal systems. In American constitutional law, they appear in First Amendment cases, in Equal Protection cases, and in Dormant Commerce Clause cases, among others. They perform similar functions in European Law, such as in the jurisprudence of Articles 30 and 36 of the Treaty of Rome. They may be found in a number of articles of the North American Free Trade Agreement (NAFTA), and they play an essential role in the law of the World Trade Organization (WTO).

Despite the extensive use of least restrictive means requirements in the law, their meaning has rarely been explored with care. Precisely how does one determine whether some regulatory policy is a less restrictive alternative (or not)? One class of cases seems clear—when an alternative regulation unquestionably achieves a clearly stipulated regulatory objective at equal or lower cost to regulators while imposing a lesser burden on some other valued interest (free speech, free trade, or the like), the alternative is "less restrictive." But these conditions seem quite narrow, and the question arises whether a challenged regulation will necessarily pass muster when they do not hold. A proposed alternative may be somewhat more costly to implement, for example, or slightly less effective at achieving the stated regulatory objective, yet still seem quite preferable if it is much less burdensome on the interest that is protected by the least restrictive means requirement.

One wonders, therefore, whether a least restrictive means analysis will drift toward broader cost-benefit analysis. That is the central question this Essay explores. The answer may well depend on context, and in this short Essay I cannot explore the least restrictive means test in all of its domestic and international manifestations. The analy-

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1 The term "least restrictive means" originated in American law, and equivalent legal concepts often go by other labels elsewhere. Thus, European law and international trade agreements often invoke the "necessity" test instead—is the measure in question "necessary" to achieve the government objective at issue, or can it be achieved in a less restrictive fashion? See Part I.
sis will thus focus on the area that I know the best, the law of the WTO system. The objective is strictly a positive one—to understand least restrictive means analysis as it is in fact employed within the WTO, and not to comment on its wisdom.²

Although the WTO legal system is relatively young and the pertinent decisions are few, my claim is that least restrictive means analysis in the WTO to date is simply a crude cost-benefit analysis, constrained by an awareness of error costs and uncertainty. Regulations that seem likely to be wasteful are more likely to be condemned under the least restrictive means test when the costs of erroneously condemning them are small, and when the costs of any reduction in compliance with the stated regulatory objectives are small. In this sense, least restrictive means analysis in the WTO may be viewed as sensible cost-benefit analysis under uncertainty.³

² This emphasis differentiates the discussion here from previous work on the WTO, which is almost exclusively normative and often embodies presuppositions about the way that least restrictive means tests will operate that are not entirely accurate, in part because WTO jurisprudence in the area had not taken shape to any degree at the time of these earlier writings.


³ The literature on cost-benefit analysis, both critical and favorable, is vast. For a window into the issues, see, for example, Cass R. Sunstein, Cost-Benefit Default Principles, 99 Mich L Rev 1651, 1654–56 (2001) (discussing cost-benefit principles in regulatory policy); Matthew D. Adler and Eric A. Posner, Rethinking Cost-Benefit Analysis, 109 Yale L J 167, 167 (1999) (de-
I. THE "LEAST RESTRICTIVE MEANS" IN GATT AND WTO AGREEMENTS

Least restrictive means tests or the equivalent appear in multiple places under WTO law. The General Agreement on Tariffs and Trade (GATT) of 1947, which was subsumed within the new WTO system in 1995, embodies the basic reciprocal commitments to lower tariff barriers that lie at the heart of the WTO system. It also contains a number of other requirements, including limitations on quantitative restrictions and various nondiscrimination commitments. Article XX of GATT, however, provides a list of “general exceptions,” which a member nation can invoke as an affirmative defense to a breach of GATT obligations. Article XX reads, in pertinent part:

[N]othing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures: (a) necessary to protect public morals; (b) necessary to protect human, animal or plant life or health; ... (d) necessary to secure compliance with laws or regulations which are not inconsistent with the provisions of this Agreement.

Through the years, GATT dispute panels had a number of occasions to interpret the term “necessary” in these exceptions. One panel concerned with the exception in Article XX(d) found that:

[A] contracting party cannot justify a measure inconsistent with another GATT provision as “necessary” . . . if an alternative measure which it could reasonably be expected to employ and which is not inconsistent with other GATT provisions is available to it. . . . [I]n cases where a measure consistent with other GATT provisions is not reasonably available, a contracting party is bound to use, among the measures reasonably available to it, that which entails the least degree of inconsistency with other GATT provisions.

Subsequently, a panel concerned with Article XX(b) concluded that the word “necessary” should have the same meaning there, and held that the purpose of both exceptions is “to allow contracting parties to impose trade restrictive measures inconsistent with the [GATT] to pursue overriding public policy goals to the extent that

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5 Id at 45.
such inconsistencies were unavoidable.”7 Such inconsistent measures could be considered to be necessary “only if there were no alternative measure consistent with [GATT], or less inconsistent with it, which [a party] could reasonably be expected to employ.”8 The requirement for parties to use the “least inconsistent” measure reasonably available is, of course, just a linguistic variant of a least restrictive means test.

The creation of the WTO in 1995 added a number of new treaty texts that went beyond the original GATT on many issues. Some of them borrow from the “necessity” test of GATT Article XX. The Agreement on the Application of Sanitary and Phytosanitary Measures addresses national regulatory policies aimed at the spread of diseases, pests, and disease-carrying organisms, as well those aimed at controlling risk from “additives, contaminants or toxins” in foodstuffs.9 The Agreement requires WTO members to ensure that any such measure “is applied only to the extent necessary to protect human, animal or plant life or health.”10 Another provision goes on to formulate a separate least restrictive means requirement: Members must “ensure that such measures are not more trade-restrictive than required to achieve their appropriate level of sanitary or phytosanitary protection, taking into account technical and economic feasibility.”11

The WTO Agreement on Technical Barriers to Trade, which covers product regulations that fall outside the scope of the Sanitary and Phytosanitary Measures Agreement, incorporates least restrictive means requirements as well. For example, “technical regulations shall not be more trade-restrictive than necessary to fulfill a legitimate objective, taking account of the risks non-fulfillment would create.”12 Likewise, “[t]echnical regulations shall not be maintained if . . . changed circumstances or objectives can be addressed in a less trade-restrictive manner.”13 Other examples of least restrictive means or necessity requirements might be given, but these should suffice to

8 Id at ¶ 75.
10 Id at Art 2.2.
11 Id at Art 5.6. The footnote to this provision states that “a measure is not more trade restrictive than required unless there is another measure, reasonably available taking into account technical and economic feasibility, that achieves the appropriate level of sanitary and phytosanitary protection and is significantly less restrictive to trade.” Id at Art 5.6 n 3.
12 WTO Agreement on Technical Barriers to Trade Art 2.2, reprinted in Jackson, Davey, and Sykes, Documents Supplement at 150 (cited in note 4).
13 Id at Art 2.3.
make the point that such requirements have evolved into important constraints on the domestic regulations of WTO members.

II. THE LEAST RESTRICTIVE MEANS TEST IN WTO/GATT PRACTICE

Neither the WTO treaty texts nor the elaboration of the necessity test by the pre-WTO GATT panels cited above offer much guidance as to how the necessity and least restrictive means requirements are to be implemented in practice. For example, what does it mean to say that an alternative measure is “reasonably available,” or that a party can “reasonably be expected” to employ it? How does one determine whether a measure is more trade restrictive than required, “taking into account technical and economic feasibility?” Definitive interpretations of each instance of the necessity and least restrictive means tests in WTO law are not yet available, but the WTO decisions to date strongly suggest that cost-benefit logic lies at the center of analysis. I begin with a summary of all the pertinent decisions and conclude with a discussion of their implications.

A. WTO Decisions

1. Korea—Beef.

The Korean beef dispute involved a number of Korean regulations that affected the sale of imported beef. One of the challenged regulations was the “dual retail system” for the sale of domestic and imported beef, which required that small stores carry either only domestic or imported beef (although they could choose which), while large stores had to sell imported and domestic beef in different sections of the store. The Panel found that the regulation violated Korea’s nondiscrimination obligations under WTO law, and that it was not protected by the Article XX(d) exception to those obligations. Both findings were appealed but only the latter issue concerns us here.

Korea defended the regulation under Article XX(d) on the grounds that it was necessary to protect consumers against fraudulent practices condemned by its Unfair Competition Act, a “law ... not in-

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14 WTO, Korea—Measures Affecting Imports of Fresh, Chilled and Frozen Beef, Report of the Appellate Body, ¶ 186, WT/DS161 & 169/AB/R (Jan 10, 2001) (upholding the Panel’s conclusions that “Korea’s dual retail system for beef is inconsistent with Article III:4 of the GATT 1994” and “is not justified under Article XX(d) of the GATT 1994”). This and all other WTO decisions are online at http://www.wto.org.

15 “[N]othing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures ... necessary to secure compliance with laws or regulations which are not inconsistent with the provisions of this Agreement.” Reprinted in Jackson, Davey, and Sykes, Document Supplement at 45 (cited in note 4).
consistent with the provisions of [GATT]” as contemplated by Article XX(d)." Korea argued that its domestic beef was generally of higher quality, and was much more costly, than imported beef. The record in the case indeed seemed to suggest that Korean consumers would pay a premium for the domestic product. As a result, retailers had an incentive to pass off imported beef as domestic beef, and the dual retail system was said to be “necessary” to prevent these fraudulent practices. Korea’s claim of necessity rested on the proposition that the dual retail system was more effective at policing fraud than alternatives because it was as an ex ante measure that prevented the commingling of imported and foreign beef that might lead to fraud." It argued that the alternative to the dual retail system was a system of ex post enforcement actions that would inevitably fail to catch some fraudfeasors, and therefore did not guarantee the level of anti-fraud enforcement that Korea had chosen for itself. Further, the alternative of policing shops to check for fraud was infeasible, because Korea “lacks the resources necessary to police thousands of shops on a round-the-clock basis.”

In considering Korea’s arguments, the Appellate Body accepted the proposition that those laws were of the sort contemplated by Article XX(d), and focused its attention on its necessity test." It suggested that “the term ‘necessary’ refers . . . to a range of degrees of necessity. . . . [A] ‘necessary’ measure is, in this continuum, located significantly closer to the pole of ‘indispensable’ than to the opposite pole of simply ‘making a contribution to.”

[A] determination of whether a measure, which is not ‘indispensable’, may nevertheless be ‘necessary’ within the contemplation of Article XX(d), involves in every case a process of weighing and balancing a series of factors which prominently include the contribution made by the compliance measure to the enforcement of the law or regulation at issue, the importance of the common interests or values protected by that law or regulation, and the accompanying impact of the law or regulation on imports or exports.

Applying this test, the Appellate Body found it instructive that dual retail systems had not been employed with respect to other products, where a similar risk of consumer confusion might arise, and
it had not been applied to restaurants where 45 percent of all beef was sold. It was "not persuaded that Korea could not achieve its desired level of enforcement" by devoting "more resources" to conventional enforcement efforts in the beef sector. "Violations of laws and regulations like the Korean Unfair Competition Act can be expected to be routinely investigated and detected through selective, but well-targeted, controls of potential wrongdoers." Finally, even though alternative enforcement measures "could well entail higher enforcement costs for the national budget," the alternative Korea had chosen had "in effect shifted all, or the great bulk, of these potential costs ... to imported goods and retailers of imported goods," an "onerous shifting of enforcement costs which ordinarily are borne by the Member's public purse." Accordingly, the Appellate Body affirmed the finding that the dual retail system was not "necessary."

2. **EC—Asbestos.**

The asbestos dispute arose when France enacted a ban on the sale of virtually all products containing asbestos in any form. Canadian firms had previously produced and exported to France various products for the construction industry, such as concrete forms reinforced with an asbestos-containing fiber. The French regulation put an end to these exports, and Canada complained that this policy violated WTO nondiscrimination obligations as well as obligations to eschew the use of quantitative restrictions on international trade. A dispute panel agreed with Canada that a violation of these obligations was present, but held that the Article XX(b) exception for measures necessary to protect human health was applicable to the ban so that no ultimate violation of WTO law arose.

On appeal, Canada challenged the panel's reliance on Article XX(b), contending in particular that a total ban on asbestos-containing articles was not "necessary" to the protection of human
health. In this regard it raised four arguments: (1) that the panel erred in finding that the asbestos-containing products created some health risk; (2) that the panel could not find that a measure was protected by Article XX(b) unless it had a quantitative estimate of the magnitude of the risk that it avoided; (3) that the panel inappropriately characterized the regulatory objective as being a complete halt to the spread of asbestos-related health risks, as it failed to take account of the fact that substitute products also created health risks; and (4) that the panel erred in finding that the “controlled use” of asbestos-containing products was not a reasonably available alternative.

The first two arguments are of little interest here and were dispensed with easily by the Appellate Body—the challenge to the finding of a health risk was a challenge to a basic factual finding that would not be disturbed on appeal, and the suggestion that the risk must be quantified finds no textual support in Article XX or in prior cases. The third and fourth arguments, by contrast, raise more fundamental issues and require somewhat greater attention.

Canada’s third argument was, in effect, that France had established a risk baseline that tolerated some health risk from construction products like those at issue. Hence, the panel should have asked whether some less restrictive policy could have achieved the same level of overall health risk as the situation that prevailed after the ban on asbestos-containing products. The panel, by contrast, had found that France’s goal was to achieve zero risk from asbestos, and that it was accordingly “necessary” to ban asbestos-containing goods altogether. The analysis suggested by Canada would have been challenging to be sure—it would have required a determination as to the overall health risk associated with substitute products with the ban in place, and an analysis of whether alternatives to a ban on asbestos-containing products could achieve a comparable risk level.

The Appellate Body’s response is somewhat opaque, but seemingly amounts to the proposition that in a case such as this one, least restrictive means analysis will not restate the regulatory goal pro-

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32 See id at ¶ 165.
33 See id.
34 See id at ¶¶ 166–67.
35 The Appellate Body stated:

[It is undisputed that WTO members have the right to determine the level of protection of health that they consider appropriate in a given situation. France has determined, and the Panel accepted, that the chosen level of health protection ... is a ‘halt’ to the spread of asbestos-related health risks ... Our conclusion is not altered by the fact that [substitute] fibres might pose a risk to health. The scientific evidence before the Panel indicated that the risk posed by the [substitute] fibres is, in any case, less than the risk posed by ... asbestos fibres.

Id at ¶ 168.]
pounded by a WTO member. If the stated goal is zero risk from asbestos, then WTO law merely inquires whether the measure in question is necessary to that goal, even if the overall level of health risk is not zero due to the risks from substitutes, and even if some less restrictive alternative policy arguably could achieve a comparable overall level of risk. The implicit constraint is merely that the regulatory policy in question cannot exacerbate the risk in relation to the alternatives—the substitutes cannot create more risk than the products they supplant. Regarding Canada’s fourth argument about the “controlled use” of asbestos products as a less restrictive alternative, the Appellate Body again addressed the question left open by some of the earlier GATT decisions—what does it mean to say that an alternative is “reasonably available”? It referred briefly to an earlier panel finding that had not been appealed to the effect that “an alternative measure did not cease to be ‘reasonably’ available simply because the alternative measure involved administrative difficulties.” It then quoted its opinion in the Korean beef case regarding the factors relevant to the “weighing and balancing process,” and concluded that:

In this case, the objective pursued by the measure is the preservation of human life and health . . . . The value pursued is both vital and important in the highest degree. The remaining question, then, is whether there is an alternative measure that would achieve the same end. The last step was to point to scientific evidence in the record to the effect that “controlled use” (such as ensuring that the demolition of buildings with the asbestos-containing products are conducted by personnel wearing protection from airborne asbestos fibers) was not perfect. Some risks of asbestos exposure would always remain, and hence controlled use would not achieve the stated health objective.

3. EC—Hormones.

In the 1980s, European regulators decided that the administration of growth hormones to beef cattle creates some human health risk (primarily a risk of cancer), even though scientific evidence of the risk from small residues was scant at best for most of the hormones in question. Europe prohibited the use of growth hormones on cattle for human consumption in Europe, and also prohibited the importation of beef from other nations that do not ban the use of growth hor-

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36 See note 35.
37 Id at ¶ 169.
38 Id at ¶ 172.
39 See id at ¶ 174.
40 See id.
mones. As a result, a number of exporting nations, including the United States and Canada, were no longer able to sell their beef in Europe. (The option of certifying beef as hormone-free to the satisfaction of European regulators was evidently uneconomical.) The dispute simmered for many years, and was quickly brought to the WTO after its formation pursuant to the new Agreement on the Application of Sanitary and Phytosanitary Measures which, as noted earlier, requires Europe to ensure, inter alia, that its food safety regulations are not more trade restrictive than necessary to achieve its legitimate regulatory objectives.

I note the case not for what it says on this issue, but for what it does not say. Although Europe lost the case on other grounds, the parties to the case did not even raise the least restrictive means issue, despite obvious arguments that might have been made in that regard. Europe had characterized its regulation as a "zero residue" policy. But rather than understanding the goal as a zero residue objective, it could have been recharacterized as a zero risk objective. Evidence might then be adduced to establish that zero risk is achieved at low level residues (such as those permitted under hormone-residue standards promulgated by international standardization bodies), and a regulatory policy tolerating that level of residue might be deemed a less restrictive alternative. As another possibility, perhaps the regulatory objective could be restated as one of ensuring that consumers are protected against unwitting ingestion of hormone residues that they might prefer to avoid. Then, perhaps a labeling requirement for hormone-raised beef might be a less restrictive alternative. Yet, these strategies were not pursued at all. One must be cautious in drawing an inference about the law from the fact that litigants did not raise an argument, but the fact that attorneys for the United States opted not to pursue least restrictive means arguments surely suggests that they saw little hope for them on these facts.

B. GATT Decisions

Before discussing the implications of the WTO cases, it is useful to note briefly how the "necessity" issue was resolved in practice by pre-WTO GATT panels.

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41 See WTO, *EC Measures Concerning Meat and Meat Products* (Hormones), Report of the Appellate Body, ¶¶ 1, 253, WT/DS/26 & 48/AB/R (Jan 16, 1998) (upholding "the Panel's finding that the EC measures at issue are inconsistent with the requirements of Article 5.1 of the SPS Agreement").
1. **United States—Section 337 of the Tariff Act of 1930.**

Section 337 of the U.S. Tariff Act of 1930 provides for actions before the International Trade Commission when the importation of articles involves unfair methods of competition. It has primarily been invoked in patent disputes. The European Community challenged a prior version of the law as a violation of the nondiscrimination obligations of GATT. The premise of the challenge was that domestic patent infringers could only be sued in U.S. courts, while the producers of imported goods that were alleged to infringe U.S. patents could either be sued in a court proceeding or subjected to an action under Section 337, which differed with regard to the time frame for the action, the procedures, and the remedies available. For example, the remedy in court was either damages or injunction, while the remedy under Section 337 included the possibility of an order directing the Customs Service to bar the offending goods from entering the United States.

The dispute panel found that impermissible discrimination was indeed present, and proceeded to consider whether the United States had a defense under Article XX(d), treating the patent laws generally as “laws . . . not inconsistent with [GATT].” By and large, the features of Section 337 that might disadvantage respondents relative to an action in U.S. court were held not to be “necessary” to the enforcement of the patent laws. The fact that Section 337 cases proceed much more quickly, for example, could not be justified as essential to the enforcement of the law—if speed was essential, why only when the infringing goods were imported?

The only feature of Section 337 that the panel felt might be “necessary” was the in rem remedy, and the opportunity for orders to be issued to the Customs Service to exclude offending goods. The panel reasoned that in personam remedies might be ignored or evaded by foreign producers who were not subject to arrest in the United States and might have no assets to be seized by U.S. authorities. The only viable option for preventing the sale of infringing goods, therefore, might be to exclude them from U.S. markets.

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42 See *United States—Section 337 of the Tariff Act of 1930* at ¶ 2.2 (cited in note 6).
43 See id.
44 Id at ¶ 1.3.
45 See id at ¶ 2.8.
46 See id at ¶ 2.8(1).
47 Id at ¶ 5.22.
48 See id at ¶¶ 5.28–5.30.
49 See id.
50 See id at ¶¶ 5.31–5.33.
51 See id.
52 See id.
2. *Thailand—Cigarettes.*

Thailand engaged in a number of regulatory practices that disadvantaged foreign sellers of cigarettes. Most prominently, Thailand required import licenses to be issued before cigarettes could be imported, and allegedly had refused to issue any such licenses for a decade.\(^{53}\)

Thailand defended its practices on two grounds. First, it argued that the government was concerned about the adverse health impact from the growing use of cigarettes by the Thai population.\(^{54}\) Second, it argued that imported cigarettes contained certain additional chemicals, such as those designed to lower tar and nicotine content, that might pose a health risk.\(^{55}\) Both arguments were claimed to afford a defense to the challenged practices under GATT Article XX(d).\(^{56}\)

The panel ruled that the discriminatory treatment of imported cigarettes could not possibly be “necessary” to the goal of curtailing smoking.\(^{57}\) It noted that a number of nondiscriminatory alternatives could be employed to that end—measures that raise the prices of all cigarettes uniformly, for example, or that restrict advertising uniformly.\(^{58}\) Regarding the argument that imported cigarettes contained potentially dangerous chemicals or additives, the panel also concluded that an outright ban on imports was not “necessary” to address the problem.\(^{59}\) It suggested that Thailand could simply ban cigarettes containing specific additives that were dangerous or unhealthy, and as to other additives it could employ nondiscriminatory labeling requirements that ensured disclosure to the consumer.\(^{60}\)

3. *United States—Marine Mammal Protection Act (Tuna-Dolphin).*

The Tuna-Dolphin case involved, among other things, a U.S. statute that prohibited the importation of tuna caught using certain fishing methods that kill dolphins.\(^{61}\) The statute applied to all tuna imports, even if the fish were caught in international waters or in the ter-

\(^{53}\) *See Thailand—Restrictions on Importation of and Internal Taxes on Cigarettes at ¶ 6* (cited in note 7).

\(^{54}\) *See id at ¶ 21.*

\(^{55}\) *See id at ¶ 28.*

\(^{56}\) *See id at ¶¶ 21, 28.*

\(^{57}\) *See id at ¶ 81.*

\(^{58}\) *See id at ¶¶ 78–80.*

\(^{59}\) *See id at ¶ 77.*

\(^{60}\) *See id.*

\(^{61}\) *United States—Restrictions on Imports of Tuna, 39th Supp GATT BISD 155, ¶¶ 2.5, 7.1 (1993) (not adopted) (concluding that the “prohibition of imports of certain yellowfin tuna... and the provisions of the Marine Mammal Protection Act under which it is imposed are contrary to Article XI:1 and are not justified by Article XX(b) or Article XX(g)”).*
territorial waters of another nation. It was challenged as a violation of GATT nondiscrimination obligations, or alternatively as a violation of GATT commitments regarding quantitative restrictions. In a report that was never adopted in the GATT and that accordingly never became binding, the Panel found violations of GATT commitments and proceeded to consider whether the United States could invoke an Article XX exception.

Among other things, the United States argued that its policy was "necessary" to protect animal health under Article XX(b). Much of the discussion on this point centered on whether the United States could invoke Article XX(b) with respect to animals outside of its jurisdiction, but the report also contained some discussion of the "necessity" test. In particular, the panel noted that one important and highly trade-restrictive feature of U.S. law did not appear to be "necessary":

The United States linked the maximum incidental dolphin taking rate which Mexico had to meet during a particular period in order to be able to export tuna to the United States to the taking rate actually recorded for United States fisherman during the same period. Consequently, the Mexican authorities could not know whether, at a given point in time, their policies conformed to the United States's dolphin protection standards.

In addition, the panel held that the United States had not shown that it had exhausted other avenues for the protection of dolphins, "in particular through the negotiation of international cooperative arrangements, which would seem to be desirable in view of the fact that dolphins roam the waters of many states and the high seas."

C. Implications

Although the number of cases over the history of the WTO/GATT system applying a least restrictive means test is small, the cases to date are consistent in my view with the proposition that the test is a crude form of cost-benefit balancing that is highly attentive to error costs and uncertainty. By "crude," I mean that the WTO decisionmaker does not actually quantify the costs and benefits of alternative regulatory policies in dollars or some other metric. Rather, the decisionmaker proceeds more impressionistically and qualita-

62 Id at ¶ 3.1.
63 See id at ¶ 5.18, 5.23.
64 Id at ¶ 5.24.
65 See id at ¶ 5.25.
66 Id at ¶ 5.28.
67 Id.
tively to assess the effect of alternative policies on trade, the administrative difficulties and resource costs associated with alternative policies, and the regulatory efficacy of those policies. It then weighs these considerations in making a decision.

The attention to error costs and uncertainty is evident in the hesitancy of decisionmakers to hold that an alternative is less restrictive (or that the challenged policy is not "necessary") if the alternative policy may be less efficacious and if the value of regulatory efficacy is great. Thus, for example, if the regulatory objective relates to some highly valued interest such as the protection of human life, then the challenged regulation will be upheld if there is any doubt as to the ability of the proposed alternative to achieve the same level of efficacy. This practice may be understood as a recognition of the fact that the costs of an erroneous decision—loss of life—would be extremely high, and that even a small probability of an erroneous decision counsels against condemning the measure under scrutiny.

By contrast, where the regulatory objective relates to some less important interest, and the proposed alternative is considerably less restrictive of trade, decisionmakers can condemn a challenged regulation even when the efficacy of the proposed alternative regulation may be less than the efficacy of the challenged regulation. Likewise, where an alternative regulation is clearly less restrictive of trade and there is no doubt as to its efficacy in achieving regulatory goals, the mere fact that it is somewhat more costly for regulators to implement will not prevent the decisionmaker from condemning the challenged regulation. These last observations make clear that the "narrow" conditions set forth in the introduction to this Essay need not hold before a less restrictive alternative may be found, and further indicate that an important degree of (crude) cost-benefit balancing is involved in the analysis.

Each of the adopted decisions to date fits nicely within this framework. In Korea—Beef, the dual retail system may well have made it easier for regulators to prevent the passing off of imported meat for domestic meat. Korea argued that before the system was put in place, fraud was difficult to police because once beef was unpacked it was largely impossible to determine its origin. Likewise, the alternative of trying to police fraud through spot inspections may have been more expensive. Nevertheless, in the face of evidence that the dual retail system had constrained the number of outlets for the imported product and significantly reduced its sales, the policing method that Korea employed to deal with other forms of consumer fraud was deemed less restrictive. The result may be explained by the fact that the cost of fraud to consumers—unwitting consumption of imported
rather than domestic beef—was clearly modest at best. Any reduction in the efficacy of regulation was thus of little moment.

In EC—Asbestos, Canada argued forcefully that asbestos was of no danger unless airborne, and that carefully "controlled use" of its construction products with embedded asbestos fibers would protect against any hazard. The market should decide whether the extra costs of controlled use were worth incurring. But the European response that the absolute efficacy of controlled use had not been established in all settings, and that the products might fall into the hands of individuals who did not follow sound "controlled use" guidelines, carried the day. It was enough that the proposed alternative might not be as effective as a complete ban on the products, and that the health hazard was real. Likewise, neither the Panel nor the Appellate Body would accept Canada's attempt to recharacterize the regulatory objective as some (non-zero) overall level of health risk based on the risks that France would apparently tolerate from substitute products. To do so would have embroiled them in an error-fraught task of trying to determine whether the residual hazard with controlled use was less than or greater than the hazards from substitutes.

Given the decision in EC—Asbestos, it seems that attorneys for the United States in EC—Hormones were right to eschew least restrictive means arguments. They too would have rested on an attempt to recharacterize the regulatory objective in Europe as zero risk rather than zero residue, or perhaps as informed choice. Considering the health risk at stake, any serious possibility that positive hormone residues create a health hazard would almost certainly have prevented a finding that international residue standards or labeling requirements were a less restrictive alternative. The only realistic hope for the United States, therefore, was to show that the zero residue standard was completely unjustified from a scientific standpoint, and violated a different requirement in the Sanitary and Phytosanitary Measures Agreement—a requirement that measures be based on a scientific risk assessment. Success on that front would make the least restrictive means argument superfluous, while failure on that front would surely have doomed the least restrictive means analysis as well.

Although the old GATT cases are not legally "binding" in the WTO, at least the adopted panel reports from GATT have some persuasive authority. It is instructive to note that the results in these early

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68 For more on the hormones case and the role of scientific evidence requirements in WTO law, see Alan O. Sykes, Domestic Regulation, Sovereignty and Scientific Evidence Requirements: A Pessimistic View, 3 Chi J Intl L 353, 358-61 (2002) (discussing the Appellate Body's analysis in ruling that the European prohibition of meat products from cattle raised with growth hormones violated the scientific evidence requirement).
cases comport with the approach of the WTO cases—indeed, they are for the most part extremely easy cases in which the existence of less restrictive alternatives could hardly be contested under any standard.

In U.S. — Section 337, it was impossible to explain why most of the rules that discriminated against foreign firms alleged to have infringed U.S. patents contributed to any legitimate regulatory objective. A fortiori, nondiscriminatory alternatives were less restrictive. The one exception—in rem remedies—had no plausible substitute in cases where the foreign infringer could not be reached personally due to the absence of any physical or financial presence in the United States. And it was difficult to imagine how an in rem measure at the border could be applied on a nondiscriminatory basis to domestic goods.

Thailand — Cigarettes is similar in important respects. The discriminatory treatment of imported goods was not plausibly needed if the goal was to reduce smoking. Indeed, measures that raised the price or restricted the quantity of imports but not domestic substitutes are plainly inferior to measures that raise price or restrict quantity across the board. As for the purported health concerns of the Thai government about the additives in foreign cigarettes, Thailand was free to enact a nondiscriminatory ban on cigarettes containing any additive that was thought to pose a health hazard, and to require disclosure of all additives. Even though health concerns were at issue, therefore, there seemed to be no uncertainty about the adequacy of trade neutral measures to take care of them.

Tuna-Dolphin, the one unadopted decision noted here, also involved a practice that had no plausible justification as an animal health measure—a regulation that conditioned the right to import on an incidental dolphin kill requirement that was only revealed after foreign fishermen had landed their catch. Whatever the permissible threat to dolphins, there was no reason why it could not be specified in advance. The one dimension of the case that is rather unusual is the suggestion that prior negotiation to achieve a cooperative solution was needed before the United States could unilaterally require other nations to comply with its dolphin protection policy as a condition of the right to export to the United States. 69 Without more details on the

69 This idea resurfaced in a more recent WTO case, albeit not in the context of a least restrictive means analysis. See United States—Import Prohibition of Certain Shrimp and Shrimp Products, Report of the Appellate Body, ¶¶ 172, 187, WT/DS58/AB/R (Nov 6, 1998) (stating that “the failure of the United States to pursue negotiations for establishing consensual means of protection and conservation of the living marine resources here involved” rose to the level of “unjustifiable discrimination”; and concluding that the United States protective measure was “not justified under Article XX of the GATT 1994”). This case involved measures to protect sea turtles, prohibiting shrimp imports from nations that used shrimping methods deemed unsafe for the turtle population by the United States. The Panel and the Appellate Body found that the
contours of such a requirement—how long must negotiation be given
to succeed, what if other nations do not give in to U.S. demands, and
so on—it is difficult to know whether this requirement is onerous or
trivial, and thus difficult to evaluate its relationship to the framework
developed here.

The reader may complain that I have given too little attention to
competing hypotheses. The most obvious alternative might be the hy-
pothesis that least restrictive means analysis in the WTO is political
cover for motive review—that its real function is to identify policies
motivated by protectionism rather than by some legitimate, non-
protectionist objective. A similar suggestion has been advanced with
reference to the cases decided under the dormant Commerce Clause
of the U.S. Constitution.70

Undeniably, at least some of the cases discussed above could be
viewed as consistent with this hypothesis as well. But without going
on at length, I reject it because the WTO has shown itself more than
willing to condemn practices that have clear nonprotectionist origins
(as in the EC—Hormones case71). There is little reason to think that
least restrictive means analysis is more cabined in this respect than
other inquiries under WTO law. Nevertheless, an ideal test case for
discriminating among these hypotheses remains to be decided.

CONCLUSION

This Essay has argued that least restrictive means analysis in the
WTO/GATT system to date is roughly co-extensive with (crude) cost-
benefit analysis. The analysis gives great weight to the presence of un-
certainty about the efficacy of regulatory alternatives when a vital in-
terest like human health is genuinely at stake, but this feature too
comports with the logic of cost-benefit analysis under uncertainty. It is
an open question whether least restrictive means analysis works simi-
larly in other legal contexts. One suspects that it does, but systematic
exploration of that issue remains for future research.

United States had negotiated agreements regarding the protection of sea turtles with some na-
tions but had made no attempt to negotiate them with others, and thus engaged in “unjustifiable
discrimination” in violation of the chapeau to Article XX. See id at §§ 166–72.

70 See Donald H. Regan, The Supreme Court and State Protectionism: Making Sense of the
Dormant Commerce Clause, 84 Mich L Rev 1091, 1206–84 (1986) (arguing that the Supreme
Court, in its dormant Commerce Clause jurisprudence, has been concerned exclusively with
preventing state protectionism).

71 The regulations in question there were promulgated after well-publicized incidents in
which the ingestion of beef from cattle treated with the hormone DES produced some nasty