

REACHING FOR ENVIRONMENTAL AND ECONOMIC HARMONY: CAN TTIP NEGOTIATIONS BRIDGE THE U.S.-EU CHEMICAL REGULATORY GAP?

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TABLE OF CONTENTS

I.	INTRODUCTION.....	728
II.	INTERNATIONAL TRADE AND ENVIRONMENTAL LAW FRICTION	730
III.	THE TRANSATLANTIC TRADE AND INVESTMENT PARTNERSHIP	732
	A. <i>State of Negotiations</i>	733
	B. <i>Fundamental Differences Between U.S. and EU Environmental Law and the Effect on TTIP Negotiations</i>	734
IV.	REACH & TSCA: A COMPARISON	736
	A. <i>REACH</i>	736
	B. <i>TSCA's</i>	739
	1. <i>TSCA Structure</i>	740
	2. <i>TSCA in Action</i>	741
	C. <i>REACH/TSCA Similarities and Differences</i>	743
	1. <i>Similarities</i>	744
	2. <i>Differences</i>	744
V.	REACH'S CONSISTENCY WITH INTERNATIONAL TRADE LAW	746
	A. <i>TBT Agreement</i>	748
	B. <i>Harmonization</i>	753
VI.	CONCLUSION	756

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I. INTRODUCTION

From toothpaste to toilet paper, chemicals play an integral role in producing essential everyday items.¹ Though many chemicals are harmless and beneficial, poor management of hazardous chemicals can devastate the environment and jeopardize health.² In 2006, the European Union (EU) passed sweeping chemical legislation to protect human health and the environment through the Registration, Evaluation, Authorization and Restriction of Chemicals Regulation (REACH).³ However, the Transatlantic Trade and Investment Partnership (TTIP) trade negotiations between the United States and EU could threaten REACH's future effectiveness.⁴ TTIP is a proposed free trade agreement between the U.S. and the EU to further open the market between the world's two largest economies.⁵ By further synchronizing and liberalizing the economic relationship between the EU and the U.S., trade representatives predict TTIP will increase wealth and create jobs.⁶ However, these economic pursuits could result in environmental degradation.⁷ Environmentalists fear that TTIP could undermine the EU's stringent environmental laws—particularly the recently enacted REACH.⁸

¹ Julie Gerstein, *The Truth About Natural Toothpaste*, GOOD HOUSEKEEPING (Mar. 8, 2010), <http://www.goodhousekeeping.com/health/womens-health/natural-toothpaste-ingredients-0307>; Jennifer Grayson, *Eco Etiquette: Is My Toilet Paper Toxic?*, HUFFINGTON POST (Dec. 12, 2011, 5:12 AM), http://www.huffingtonpost.com/jennifer-grayson/eco-etiquette-is-my-toilet-paper-toxic_b_1008317.html.

² *Chemicals in Our Waters Are Affecting Humans and Aquatic Life in Unanticipated Ways*, SCI. DAILY (Feb. 21, 2008), <http://www.sciencedaily.com/releases/2008/02/080216095740.htm> (discussing the contamination of waters and marine animals due to the release and accumulation of commercial chemicals).

³ Commission Regulation 1907/2006, Registration, Authorisation and Restriction of Chemicals (REACH), 2006 O.J. (L 396) 6 [hereinafter REACH].

⁴ See Brian Flood, *U.S.–EU Trade Agreement Could Result in Dangerous Deregulation, NGOs Say*, 36 INT'L ENV'T REP. 1003 (July 17, 2013).

⁵ *Transatlantic Trade and Investment Partnership (TTIP)*, ATLANTIC COUNCIL (June 21, 2013), <http://www.atlanticcouncil.org/news/in-the-news/transatlantic-trade-and-investment-partnership-ttip>.

⁶ *Fact Sheet: United States to Negotiate Transatlantic Trade and Investment Partnership with the European Union*, OFF. OF THE U.S. TRADE REPRESENTATIVE (Feb. 13, 2013), <https://ustr.gov/about-us/policy-offices/press-office/fact-sheets/2013/february/US-EU-TTIP> [hereinafter *TTIP Fact Sheet*].

⁷ Alberto Bernabe-Riefkohl, "To Dream the Impossible Dream": *Globalization and Harmonization of Environmental Laws*, 20 N.C. J. INT'L L. & COM. REG. 205, 210 (1995).

⁸ SIERRA CLUB, *THE TRANSATLANTIC FREE TRADE AGREEMENT: WHAT'S AT STAKE FOR COMMUNITIES AND THE ENVIRONMENT* 13–14 (2013), available at http://action.sierraclub.org/site/DocServer/TTIP_Report.pdf?docID=13541.

Ironically, some economists share the environmentalists' uneasiness regarding TTIP's effect on REACH because friction between national domestic regulations can compromise the success of a free trade agreement.⁹ Though multiple U.S. and EU regulations conflict, this Note focuses on the conflict between the two chemical regulatory systems and urges that the two chemical regulatory systems should be harmonized.¹⁰ Harmonization is a process in which countries seek to unify conflicting laws to ease trade burdens. This Note argues that the United States and European Union should harmonize "upward," meaning that the United States should adopt chemical regulations matching the European Union's REACH program. Upward harmonization would accomplish TTIP's economic goals by eliminating regulatory gaps that impede free trade.¹¹ Upward harmonization would also strengthen the weak chemical regulatory system established by the Toxic Substances Control Act (TSCA) in the United States.¹²

Part II will first examine the conflict between environmental law and international trade law. Part III will discuss the negotiation that led up to the TTIP Agreement. Part IV engages in a comparative analysis of REACH and TSCA. Part V examines the legality of the REACH program through the lens of the World Trade Organization (WTO), the international organization governing trade relations between countries. Finally, Part V explores various forms of regulatory harmonization and proposes full upward harmonization between REACH and TSCA.

In sum, this Note takes the position that the United States should harmonize its chemical regulations upward by enacting new legislation to update the outdated TSCA.¹³ Upward harmonization can close the chemical regulatory gap between the U.S. and the EU and begin bridging the traditional gap between environmental law and international trade.¹⁴

⁹ Bernabe-Riefkohl, *supra* note 7, at 212 (discussing the incompatibility between divergent national regulations and international economic development).

¹⁰ See SIERRA CLUB, *supra* note 8, at 6 (also proposing regulatory harmonization between divergent U.S. and EU regulatory systems to preserve and enhance environmental protection).

¹¹ Alexander M. Donahue, *Equivalence: Not Quite Close Enough for the International Harmonization of Environmental Standards*, 30 ENVTL. L. 363, 365 (2000) (stating that "[s]tandards disparities obstruct imports and exports, create inefficiencies, and increase costs for international business, which in turn impedes international trade and slows the global train of prosperity").

¹² Toxic Substances Control Act, 15 U.S.C. §§ 2601–2692 (1976) [hereinafter TSCA].

¹³ See James T. O'Reilly, *Torture by TSCA: Retrospectives of a Failed Statute*, 25 NAT. RES. & ENV'T 43, 43 (2010) ("TSCA has failed us and left us with a mere façade of effective environmental action.").

¹⁴ Matthew Tuchband, Note, *The Systemic Environmental Externalities of Free Trade: A Call for Wiser Trade Decisionmaking*, 83 GEO. L.J. 2099, 2099 (1995) (suggesting that a gap

II. INTERNATIONAL TRADE AND ENVIRONMENTAL LAW FRICTION

While the conflict between international trade and environmental law is not necessarily intuitive, it certainly exists.¹⁵ Environmentalists believe that because the free market fosters price competition, industry naturally flocks to areas where production is cheapest.¹⁶ Because environmental regulation is usually expensive, production tends to be cheapest in areas with fewer environmental regulations.¹⁷ Therefore, governments may lower environmental standards to attract industry.¹⁸

Conversely, trade advocates argue that industry flocks to areas of advanced technology.¹⁹ Further, economic growth spurred by free trade gives industry more resources to develop better environmental controls and technology.²⁰ Clearly, no simple way to reconcile the two positions exists. Nevertheless, closely examining the interaction between international trade and environment law better shapes the debate and can identify the core of the conflict.

One solid starting point for examining the relationship between international trade and environmental law is through various provisions of the General Agreement on Tariffs and Trade (GATT), the multilateral agreement governing international trade in goods.²¹ For example, the GATT contains an anti-discrimination provision called "National Treatment" in Article II but carves out environmental exceptions to this rule in Article XX.²² The National Treatment principle states that WTO member countries cannot treat domestically produced goods more favorably than similar goods imported from foreign countries.²³ GATT Article XX contains exceptions to the National Treatment provision for the preservation of human, animal, or

between environmental law and international trade exists because "[i]n much of the environmental community, trade is seen as antithetical to environmental protection").

¹⁵ See Hajin Kim, *Do Trade Liberalization and International Trade Law Constrain Domestic Environmental Regulation?*, 43 ENVTL. L. REP. NEWS & ANALYSIS 10823, 10823–25 (2013) (discussing the traditional arguments used by environmentalists and free trade enthusiasts that domestic environmental laws weaken international free trade and vice versa).

¹⁶ Daniel C. Esty & Damien Geradin, *Market Access, Competitiveness, and Harmonization: Environmental Protection in Regional Trade Agreements*, 21 HARV. ENVTL. L. REV. 265, 271 (1997).

¹⁷ See Kim, *supra* note 15, at 10823.

¹⁸ *Id.* at 10824.

¹⁹ *Id.* at 10823.

²⁰ *Id.* at 10824.

²¹ General Agreement on Tariffs and Trade, Oct. 30, 1947, U.N.T.S. 194 [hereinafter GATT].

²² *Id.* arts. III, XX.

²³ *Id.* art. III(1)–(2).

plant life or health, and the conservation of exhaustible natural resources, but only when these measures do not unnecessarily hinder trade.²⁴ The interaction between these rules illustrates a presumption underlying the international trade system: countries will use various domestic policies—one of which is environmental regulation—to protect their domestic industries from foreign competition.²⁵ Noting this seemingly hostile approach to environmental regulations, legal scholars have long lamented that environmental protection was being sacrificed for economic interests at an alarming rate.²⁶

As mentioned above, the emphasis of price competition in capitalist societies contributes to the conflict between environmental regulations and economic policies.²⁷ Companies operating in areas with weak environmental rules can generally sell goods at lower prices than companies operating in areas with strong environmental laws.²⁸ As a result, companies have an incentive to operate in areas with less stringent environmental regulations to create a higher profit margin.²⁹ Exacerbating the problem, the high cost of controlling environmental harms conflicts with the goals of cutting costs and producing competitively priced goods.³⁰

Furthermore, dispute resolution systems at the WTO and within regional trade agreements can impose large penalties for restricting imports to comply with environmental laws.³¹ These mechanisms may incentivize countries to under-enforce domestic environmental laws or never enact them at all if those laws restrict importation.³²

²⁴ *Id.* art. XX(b), (g).

²⁵ Ari Afilalo & Sheila Foster, *The World Trade Organization's Anti-Discrimination Jurisprudence: Free Trade, National Sovereignty, and Environmental Health in the Balance*, 15 *GEO. INT'L ENVTL. L. REV.* 633, 652 (2003) (noting that the broad goals of the GATT and disputes involving National Treatment claims are associated with "rooting out protectionism").

²⁶ Robert F. Housman & Durwood J. Zaelke, *Making Trade and Environmental Policies Mutually Reinforcing: Forging Competitive Sustainability*, 23 *ENVTL. L.* 545, 547 (1993).

²⁷ See Esty & Geradin, *supra* note 16, at 271 (discussing the proposition that countries compete with one another to produce cheaper goods and that stringent environmental regulations raise the price of production).

²⁸ *Id.*

²⁹ *Id.*

³⁰ *Id.*

³¹ See J. Carol Williams, *The Next Frontier: Environmental Law in a Trade-Dominated World*, 20 *VA. ENVTL. L.J.* 221, 232 (2001).

³² *Id.* at 222–25, 227 (discussing the dispute resolution mechanism in the NAFTA Investment Chapter that allows private corporations to sue governments if they believe a country's environmental laws or regulations violate its rights under the free trade agreement,

Similarly, broad societal values can push environmental and economic goals in opposite directions and create disputes.³³ For example, in an effort to protect wildlife, the U.S. restricted imports of tuna caught by purse seine fishing, a fishing method that can kill dolphins.³⁴ Ultimately, one reason the WTO Dispute Settlement Body ruled against the U.S. measure was because it undermined economic goals.³⁵ This decision left the U.S. to decide whether to pay penalties for restricting trade and continue to protect animals, or forego its environmental goals to promote trade in compliance with WTO standards. While both free trade and environmental protection enhance social well-being,³⁶ they inevitably conflict because societies, like individuals, have conflicting desires.³⁷ Therefore, conflict between environmental protection and free trade is common and often inevitable.³⁸

III. THE TRANSATLANTIC TRADE AND INVESTMENT PARTNERSHIP

President Obama announced in February 2013 that the U.S. would launch negotiations with the EU on a Transatlantic Trade and Investment Partnership (TTIP).³⁹ The overarching goal of TTIP is to enhance economic growth and create jobs by further expanding the economic relationship between the U.S. and EU, which is already the largest in the world.⁴⁰ The United States Trade Representative Office's (USTR) press release first stressed the importance of the economic relationship between the U.S. and the EU⁴¹ and then stressed the need to eliminate regulatory differences to cut costs and promote trade.⁴² Thus, the U.S. appears to be following the traditional model of the trade/environment debate by framing regulatory

as and the WTO Dispute Settlement Body's ability to quickly adopt binding reports that can result in financial retaliation against a country with trade-restrictive environmental policies).

³³ See generally Philip M. Nichols, *Trade Without Values*, 90 NW. U. L. REV. 658, 674-76 (1996) (discussing the idea that free trade principles tend to overlook other important noneconomic societal goals).

³⁴ Afilalo & Foster, *supra* note 25, at 656.

³⁵ *Id.* at 665.

³⁶ Nita Ghei, *Evaluating the WTO's Two Step Test for Environmental Measures Under Article XX*, 18 COLO. J. INT'L ENVTL. L. & POL'Y 117, 119 (2007).

³⁷ See Nichols, *supra* note 33, at 674.

³⁸ *Id.*

³⁹ *TTIP Fact Sheet*, *supra* note 6.

⁴⁰ *Id.* ("The President's decision recognizes that the U.S.-EU economic relationship is already the world's largest, accounting for one third of total goods and services trade and nearly half of global economic output.")

⁴¹ *Id.* (noting that the EU is the largest importer of U.S. goods at \$465 billion and the U.S.-EU investment relationship totals \$4 trillion and contributes to over 9 million U.S. jobs).

⁴² *Id.*

differences in terms of the economic bottom line. However, this Note posits that the U.S. has an unprecedented opportunity to turn the trade/environment conflict on its head. The U.S.'s goal of eliminating regulatory differences⁴³ could also be accomplished through upward harmonization of environmental regulatory standards to those of the EU level. Considering the Obama Administration's support for TSCA reform,⁴⁴ TTIP could be the missing link to remedying the shortcomings of TSCA while opening the market for chemical trade with the EU in an environmentally responsible way. The U.S.'s and EU's opportunity to use economic goals to reinforce environmental goals and vice versa is particularly unique in the context of TTIP because bilateral trade agreements allow nations to set new standards for unique areas such as the environment.⁴⁵

A. *State of Negotiations*

So far, the USTR has outlined two major issues regarding upcoming TTIP negotiations: eliminating nontariff barriers and reconciling regulatory differences.⁴⁶ First, leaders of the U.S. and the EU want to address trade flow problems by reducing nontariff barriers.⁴⁷ Whereas tariffs limit imports by directly placing charges on the goods at customs, nontariff barriers include nonmonetary measures that block trade, such as import quotas or strict health standards.⁴⁸ Consequently, domestic environmental laws can also operate as nontariff barriers,⁴⁹ making REACH susceptible to

⁴³ *Id.*

⁴⁴ Frances Beinecke, *Great Opportunity to Protect American Families from Toxic Chemicals*, HUFFINGTON POST (June 21, 2010, 5:12 PM), http://www.huffingtonpost.com/frances-beinecke/great-opportunity-to-prot_b_546333.html.

⁴⁵ Pascal Lamy, Director-General, World Trade Organization, Speech at the Confederation of Indian Industries Partnership Summit 2007: Emergent India: New Roles and Responsibilities (Jan. 17, 2007), available at http://www.wto.org/english/news_e/sppl_e/sppl53_e.htm.

⁴⁶ Press Release, Office of the United States Trade Representative, Transcript: Briefing by USTR Ambassador Ron Kirk and Deputy National Security Advisor Michael Froman on US-EU Trade Negotiations (Feb. 13, 2013, 9:45 AM), <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2013/february/transcript-briefing-us-eu> [hereinafter Briefing on U.S.–EU Trade Negotiations].

⁴⁷ *Id.* (stating that “[t]he high-level working group recommended that the EU and the United States . . . mak[e] substantial progress on tackling and reducing non-tariff areas and addressing liberalization in areas of service investment, labor and the environment, among other issues”).

⁴⁸ Donahue, *supra* note 11, at 365.

⁴⁹ JENNIFER L. MACHLIN & TOMME R. YOUNG, *MANAGING ENVIRONMENTAL RISK: REAL ESTATE AND BUSINESS TRANSACTIONS*, § 12:16 (2012).

elimination during negotiations if the U.S. considers REACH a nontariff barrier.⁵⁰

Early statements describing negotiations suggest that the U.S. and the EU are approaching the issue from different angles. U.S. Trade Representative Michael Froman stated that “our intent is to negotiate a comprehensive agreement . . . [by] looking at the regulatory barriers and the barriers that our different standards pose to further integration of our economy.”⁵¹ The European Commission, on the other hand, stated that the EU will:

[N]ot negotiate existing levels of protection for the sake of an agreement. [The EU's] high level of protection . . . is non-negotiable. . . The negotiations will not be about lowering standards: they are about getting rid of tariffs and useless red-tape while keeping high standards in place. There will be no compromise whatsoever on safety, consumer protection or the environment.⁵²

Thus, while both governments are eager to expand and strengthen their economies, environmental tensions are apparent from the outset.

B. Fundamental Differences Between U.S. and EU Environmental Law and the Effect on TTIP Negotiations

The official statements produced above only scratch the surface of environmental law and international trade tensions affecting TTIP negotiations. First, the U.S. and the EU disagree on the appropriate theory for approaching environmental regulation: the EU employs elements of the Precautionary Principle into environmental regulations, while the U.S. adheres more closely to a risk assessment approach.⁵³ The Precautionary

⁵⁰ SIERRA CLUB, *supra* note 8, at 13–14 (“The USTR has expressed a number of concerns over the EU’s REACH program, signaling that chemical regulatory differences will be on the TTIP negotiating table.”).

⁵¹ Press Release, Office of the United States Trade Representative, *supra* note 46.

⁵² Press Release, European Commission, FAQ on the EU-US Transatlantic Trade and Investment Partnership (‘TTIP’) (June 17, 2013), *available at* http://trade.ed.europa.eu/doclib/docs/2013/may/tradoc_151351.pdf.

⁵³ Lawrence A. Kogan, *What Goes Around Comes Around: How UNCLOS Ratification Will Herald Europe’s Precautionary Principle as U.S. Law*, 7 SANTA CLARA J. INT’L L. 23, 37 (2009) (“U.S. law has . . . employed mostly risk-based precaution, which more or less balances environmental protection against other considerations, namely empirical risk assessment and economic costs, while EU law, which employs hazard-based precaution, does not.”); *see generally* Anne C. Dowling, Note, “Un-Locke-ing” a “Just Right” Environmental

Principle adopts the position that a lack of solid scientific evidence about a potential risk should not discourage preventative regulation.⁵⁴ The U.S.'s risk assessment approach relies more heavily upon clear scientific proof of environmental dangers and economic cost-balancing before encouraging regulation.⁵⁵ Notably, the EU's Precautionary Principle approach, expressed in Article 191 of the Treaty on the Functioning of the European Union, takes a more balanced approach by mixing elements of risk assessment into its approach to the Precautionary Principle.⁵⁶ Still, the EU approach is more environmentally conscious than the U.S.'s risk assessment approach in comparison.

The EU's transparent incorporation of the principle of sustainability into domestic EU law further illustrates differences between the U.S. and EU environmental protection values. Article 2 of the European Community Treaty includes environmental protection as a general objective and adopts the principle of sustainable development in Article 6.⁵⁷ While the U.S. certainly enacts and enforces a wealth of extensive and comprehensive environmental laws, it does not have comparable constitutional provisions or federal laws with such general breadth.

Regime: Overcoming the Three Bears of International Environmentalism—Sovereignty, Locke, and Compensation, 26 WM. & MARY ENVTL. L. & POL'Y REV. 891 (2002) (describing the history and development of U.S. environmental law).

⁵⁴ See United Nations Conference on Environment and Development, Rio de Janeiro, Braz., June 3–14, 1992, *Rio Declaration on Environment and Development*, U.N. Doc. A/CONF.151/26/Rev.1 (Vol. I), Annex I (Aug. 12, 1992) (declaring in Principle 15 that in the event of “threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation”).

⁵⁵ Kogan, *supra* note 53, at 37.

⁵⁶ *Summaries of EU Legislation: The Precautionary Principle*, EUROPA, <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=URISERV%3A132042> (last visited Dec. 30, 2014) (“The precautionary principle shall be informed by three specific principles: [1] the fullest possible scientific evaluation, the determination, as far as possible, of the degree of scientific uncertainty; [2] a risk evaluation and an evaluation of the potential consequences of inaction; [and] [3] the participation of all interested parties in the study of precautionary measures, once the results of the scientific evaluation and/or the risk evaluation are available. In addition, the general principles of risk management remain applicable when the precautionary principle is invoked. These are the following five principles: [1] proportionality between the measures taken and the chosen level of protection; [2] non-discrimination in application of the measures; [3] consistency of the measures with similar measures already taken in similar situations or using similar approaches; [4] examination of the benefits and costs of action or lack of action; [and] [5] review of the measures in the light of scientific developments.”).

⁵⁷ Beate Sjaafjell, *Internalizing Externalities in EU Law: Why Neither Corporate Governance Nor Corporate Social Responsibility Provides the Answers*, 40 GEO. WASH. INT'L L. REV. 977, 978 (2009).

Another distinction between U.S. and EU environmental law is a temporal distinction. A large proportion of U.S. environmental law passed in the 1970s as citizens became more aware of mounting environmental degradation.⁵⁸ Because Congress tends to move slowly when amending existing legislation, alleged deficiencies have not been remedied efficiently or quickly.⁵⁹ On the other hand, EU environmental legislation such as REACH is more recent and engineered to better tackle present-day problems.⁶⁰ A comparative analysis of TSCA and REACH more aptly illustrates the general differences between the U.S.'s and EU's environmental law approaches and the more specific chemical regulatory differences.

IV. REACH & TSCA: A COMPARISON

The framework of REACH highlights the shortcomings of the U.S. chemical regulatory system, TSCA. This section will examine the substantive and procedural provisions of REACH before examining TSCA to illuminate those differences. Ultimately, knowing these regulatory differences can also inform and shape the harmonization discussion.

A. REACH

The basic structure of the regulation comes from REACH's title: Registration, Evaluation, Authorization, and Restriction.⁶¹ Registration, the first phase of REACH, demonstrates the unprecedented breadth of the regulation because it applies to most existing and new chemicals produced or imported in excess of one ton.⁶² Companies producing chemicals, using chemicals in the production of other items, and companies importing or

⁵⁸ Dowling, *supra* note 53, at 921–22.

⁵⁹ See generally Michael G. Faure & Jason Scott Johnston, *The Law and Economics of Environmental Federalism: Europe and the United States Compared*, 27 VA. ENVTL. L.J. 205, 212–14 (2009) (describing the onslaught of U.S. federal environmental law in the 1970s in comparison with the EU's difficulties enacting all-encompassing environmental law until after 1987 when "the EEC Treaty was revised to include provisions that specifically authorized the EC to promulgate environmental directives").

⁶⁰ See O'Reilly, *supra* note 13, at 46 (suggesting that TSCA is inadequate because chemical production and chemical exposure has changed since TSCA's enactment).

⁶¹ John S. Applegate, *Synthesizing TSCA and REACH: Practical Principles for Chemical Regulation Reform*, 35 ECOLOGY L.Q. 721, 742 (2008).

⁶² *Id.*

exporting chemicals (or “articles”⁶³ containing chemicals) in the requisite amounts must register the chemicals with the European Chemicals Agency (ECHA).⁶⁴ The ECHA is a central, independent entity managing the administration of REACH.⁶⁵ During the Registration phase, chemical manufacturers conduct tests and submit data to the ECHA regarding the physical properties and inherent risks of the chemicals they manufacture or import.⁶⁶ This data “require[s] the production of basic toxicological data, including studies of environmental toxicity . . . [and] chemical safety reports that describe exposures and measures to reduce risks.”⁶⁷ Further, REACH’s testing requirements are the most stringent in the world, emphasizing the potentially huge impact REACH could have on the global chemical industry.⁶⁸

During the “Evaluation” stage, the ECHA evaluates the information gathered by industry to determine whether the chemical or the article containing the chemical poses a threat to the environment.⁶⁹ The criteria used to make this determination include information regarding the hazardous properties of the chemical, the chemical’s structural similarity to other dangerous chemicals, how much of the chemical is produced, and the effects of exposure to the chemical.⁷⁰ If it determines that the chemical presents a risk to the environment based on these criteria, the ECA categorizes the chemical as a “substance of very high concern” (VHC).⁷¹ These VHC substances then proceed to the Authorization stage.⁷²

Passing the Authorization stage requires substitution of the VHC substance with a safer alternative, proof that risks associated with the

⁶³ REACH, *supra* note 3, art. 3(3) (defining “article” as “an object which during production is given a special shape, surface or design which determines its function to a greater degree than does its chemical composition”).

⁶⁴ *Id.* intro. (15).

⁶⁵ *Id.*

⁶⁶ Lawrence A. Kogan, *REACH Revisited: A Framework for Evaluating Whether a Non-Tariff Measure Has Matured Into an Actionable Non-Tariff Barrier to Trade*, 28 AM. U. INT’L L. REV. 489, 612–13 (2013).

⁶⁷ David A. Wirth, *The EU’s New Impact on U.S. Environmental Regulation*, 31 FLETCHER F. WORLD AFF. 91, 100 (2007).

⁶⁸ *Id.* at 91, 100, 102–03 (explaining that REACH has already begun to infiltrate the U.S. economy by influencing the actions of chemical manufacturers, and that harmonizing regulatory systems can prevent a competition distortion in the marketplace).

⁶⁹ REACH, *supra* note 3, at tit. VI, ch. 2, art. 44(2).

⁷⁰ *Id.* tit. VI, ch. 2, art. 44, (1)(a)–(c).

⁷¹ See Conrad Benedetto, *Is the European Laboratory Over-REACH-ing? The Experimentation, Reaction and Product Yielded by the European Union’s Registration, Evaluation, and Authorization of Chemicals*, 21 VILL. ENVTL. L.J. 75, 83 (2010).

⁷² Applegate, *supra* note 61, at 742.

chemical are “adequately controlled,” or proof that the benefits of the VHC substance outweigh its risks.⁷³ The European Commission, the executive arm of the EU, exerts jurisdiction over the Authorization stage.⁷⁴ The chemical may only enter the stream of commerce if the European Commission finds justification for its sale notwithstanding its dangerous properties.⁷⁵ Accordingly, if the applicant cannot substitute the VHC substance with an alternative substance or show that the chemical’s benefits outweigh its risks, then the chemical is subject to restriction.⁷⁶ The European Commission and member states centrally implement restrictions, subjecting the chemicals to a partial or total ban from the market.⁷⁷

These provisions establish a comprehensive, stringent regulatory system unlike any other in the world, which could fundamentally change global chemical trade.⁷⁸ REACH’s mandates are particularly relevant to the U.S. for several interrelated reasons. First, the U.S. is the world’s top chemical producer and exports substantial amounts of chemicals to the EU⁷⁹ Second, chemical trade primarily occurs through multinational corporations, making the chemical industry a global industry.⁸⁰ Further, because the regulatory controls outlined in REACH do not match the regulatory controls of TSCA, U.S. chemicals are not subjected to the same level of scrutiny as REACH-registered EU chemicals.⁸¹ In fact, the U.S. Environmental Protection Agency (EPA) has evaluated only 2% of the sixty thousand pre-existing chemicals since 1976.⁸² An additional twenty-two thousand new chemicals have escaped testing for public or environmental safety under TSCA.⁸³

⁷³ REACH, *supra* note 3, at intro. (22); Applegate, *supra* note 61, at 742–43; Benedetto, *supra* note 71, at 83.

⁷⁴ Wirth, *supra* note 67, at 101.

⁷⁵ REACH, *supra* note 3, at intro. (22).

⁷⁶ Applegate, *supra* note 61, at 743.

⁷⁷ REACH, *supra* note 3, at intro. (23); Applegate, *supra* note 61, at 742–43.

⁷⁸ Paul E. Hagen, *Product-Based Environmental Regulations: Europe Sets the Pace*, 6 SUSTAINABLE DEV. L. & POL’Y (2006) (“[I]n conditioning market access to adherence with new product standards, the EU is . . . establishing global product standards, as few U.S. companies can afford to ignore a potential consumer market that is now much larger than the United States or even all of North America.”).

⁷⁹ Benedetto, *supra* note 71, at 83; Applegate, *supra* note 54, at 767.

⁸⁰ Applegate, *supra* note 54, at 767; Wirth, *supra* note 67, at 103.

⁸¹ Applegate, *supra* note 61, at 741 (stating that “it is hard to read [REACH’s legislative history as] anything other than an effort to make REACH everything that TSCA was not”).

⁸² SIERRA CLUB, *supra* note 8, at 13.

⁸³ Molly Rauch, *5 Ways the Outdated Toxic Chemicals Law Makes Us Sick*, HUFFINGTON POST (Oct. 11, 2013, 6:12 PM), http://www.huffingtonpost.com/molly-rauch/toxic-substances-control-act_b_4084879.html.

Overall, 95% of chemicals have undergone little to no testing.”⁸⁴ Therefore, the EU can presumably ban importation of U.S. chemicals which have not complied with the required Registration, Evaluation, and Authorization phases of REACH, or that have already been restricted from the European market.⁸⁵ Therefore, trade tensions have surfaced because U.S. chemical regulations do not meet EU standards.⁸⁶ To better understand these regulatory differences and their effect on the trade relationship between the U.S. and EU, examining the general framework of TSCA in comparison to REACH is also helpful.

B. TSCA

Mirroring its present-day instability, TSCA had a rocky start.⁸⁷ In 1971, as federal environmental legislation swept the nation, the Council on Environmental Quality proposed toxic substances legislation aimed at regulating chemicals from the cradle to the grave.⁸⁸ After a five year delay, environmental catastrophes, such as the contamination of the Hudson River, finally prompted Congress to pass TSCA.⁸⁹ Unfortunately, TSCA did not live up to its creators’ expectations.⁹⁰ Over the years, each branch of the U.S. government has interfered with TSCA’s goal of widespread chemical regulation.⁹¹ While TSCA had the potential to comprehensively regulate chemicals and chemical manufacturing if strictly construed, it is now

⁸⁴ Wirth, *supra* note 67, at 102.

⁸⁵ See generally Kogan, *supra* note 66, at 586–87 (noting complaints by Japan and the U.S. that REACH Title VIII could result in import restrictions).

⁸⁶ See *id.* at 514 (stating that “at least thirty-four non-EU WTO Members have expressed specific trade concerns about the EU REACH regulation” signifying widespread concern throughout the international community).

⁸⁷ See generally O’Reilly, *supra* note 13, at 43 (explaining that many of TSCA’s shortcomings stemmed from successful lobbying efforts from the chemical industry).

⁸⁸ LINDA-JO SCHIEROW, CONG. RESEARCH SERV., RL31905, THE TOXIC SUBSTANCES CONTROL ACT (TSCA): A SUMMARY OF THE ACT AND ITS MAJOR REQUIREMENTS 2 (Feb. 2, 2010), available at http://www.gmaonline.org/file-manager/Chemicals/TSCA.CRS_REPORT.pdf (explaining that the purpose of TSCA was to “identify and control chemicals whose manufacture, processing, distribution, use, and/or disposal was potentially dangerous and not adequately regulated under other environmental statutes”).

⁸⁹ *Id.* (attributing the legislative delay to “controversies over the scope of chemical screening . . . costs, and [TSCA’s] relationship to other regulatory laws. . .”).

⁹⁰ See O’Reilly, *supra* note 13, at 47 (concluding that TSCA never accomplished its supporters’ goals).

⁹¹ See Applegate, *supra* note 61, at 723 (stating that TSCA’s “highly compromised final statutory text, hostile judicial interpretation, and often timid implementation” have led to the EPA primarily relying on the chemical industry to regulate itself).

toothless in comparison to REACH.⁹² According to James T. O'Reilly, one of TSCA's original negotiators, "TSCA has failed and left us with a mere façade of effective environmental action."⁹³

I. TSCA's Structure

TSCA consists of six Titles.⁹⁴ Title I sets out the general procedural and substantive requirements of the Act, while Titles II–VI cover asbestos, radon, lead, formaldehyde, and environmental topics concerning schools.⁹⁵ Titles II–VI are limited in scope, allowing the EPA to only set standards to govern usages of these chemicals in special circumstances.⁹⁶ Thus, at the outset, TSCA's conservative structure and limiting language constrain the breadth of chemical regulation in the U.S., especially in comparison to the broad scope of REACH.⁹⁷ Notwithstanding the limited application of Titles II–VI, Title I contains more broadly applicable rules and standards for chemical regulation.⁹⁸

The general structure of Title I resembles REACH's structure.⁹⁹ Chemical producers must conduct tests on potentially dangerous chemicals.¹⁰⁰ After producers submit this information to the EPA, the agency then funnels the information into a database called the "inventory" of chemicals.¹⁰¹ After the testing and information-gathering period, the EPA must regulate chemicals that it determines pose a risk to the environment.¹⁰²

⁹² O'Reilly, *supra* note 13, at 43 (observing that despite its potential, TSCA is much weaker than REACH).

⁹³ *Id.*

⁹⁴ *See generally* TSCA, *supra* note 12, §§ 2601–2692.

⁹⁵ *Id.*; SCHIEROW, *supra* note 88, at 3 (outlining Titles II–VI).

⁹⁶ *See, e.g.*, SCHIEROW, *supra* note 88, at 3 (noting that Title II focuses on asbestos usage in schools and sets requirements for asbestos contractors; Title III only guides the EPA to assist states that choose to monitor and control radon; and Title IV's scope is limited to lead-based paint).

⁹⁷ *See generally* O'Reilly, *supra* note 13, at 43 (suggesting that TSCA's weak language defeated its ambitious goals).

⁹⁸ TSCA, *supra* note 12; *see* Applegate, *supra* note 61, at 725 (noting that TSCA was structured to comprehensively regulate chemicals).

⁹⁹ *See* Applegate, *supra* note 61, at 753 ("[T]he basic structure of TSCA represents an integrated, comprehensive approach. The European Union seeks to accomplish essentially the same goals with REACH.")

¹⁰⁰ *See* SCHIEROW, *supra* note 88, at 3 (explaining that if insufficient data exists to evaluate a chemical's safety, testing is required when the chemical's production creates unreasonable risks or could potentially be released into the environment in large quantities).

¹⁰¹ *E.g., id.* at 3, 5.

¹⁰² *Id.* at 5.

2. TSCA in Action

Though the structure of Title I appears facially comprehensive and stringent—setting forth a scheme of testing, information gathering, and regulation of both old and new chemicals—TSCA has not significantly curtailed dangerous chemical production and distribution.¹⁰³ A number of factors explain this failure. First, the testing requirements set out in TSCA Section IV are conditional: manufacturers or producers must only test existing chemicals if the chemicals pose an “unreasonable risk of injury to health or the environment,” or if the chemicals are “produced in substantial quantities” and the chemical “enters or may reasonably be anticipated to enter the environment in substantial quantities,” or insufficient data prevents the EPA from safely predicting its harmful effects.¹⁰⁴ The problem is that words like “substantial,” “significant,” and “unreasonable” are inherently subjective, giving wide latitude to the interpreter.¹⁰⁵ Amplifying the problem, essentially all of TSCA’s substantive provisions are couched in the undefined term “unreasonable.”¹⁰⁶ Therefore, because most regulatory provisions are not automatically compulsory and are partly dependent upon the judgment of one individual (the EPA Administrator), some chemicals may never even enter the first stage of regulation under TSCA.¹⁰⁷

Notwithstanding these discrepancies, TSCA gives the EPA authority to identify dangerous chemicals and gather information about their potential environmental effects.¹⁰⁸ TSCA Section IV(a)’s broad language grants the EPA this authority in a wide range of circumstances.¹⁰⁹ For example, if the EPA Administrator finds that the manufacture, sale, or disposal of a chemical presents an unreasonable risk, and the effects of the chemical are unknown or uncertain, the EPA can regulate.¹¹⁰ Section IV also broadly sweeps

¹⁰³ See O’Reilly, *supra* note 13, at 43 (“TSCA was floated with great ambitions, but it has bombed with tepid results due to its flawed wording.”).

¹⁰⁴ TSCA, *supra* note 12, § 2603(a).

¹⁰⁵ See O’Reilly, *supra* note 13, at 43 (referencing the “obscure and inconsistent phrases” that have contributed to TSCA’s ineffectiveness). *But see* Applegate, *supra* note 61, at 729 (suggesting that while the term “unreasonable risk” is undefined in TSCA, legislative history and subsequent jurisprudence may guide interpretation of the term).

¹⁰⁶ Applegate, *supra* note 61, at 728, 731 (postulating that Congress’s use of the term “unreasonable” with no statutory definition was also meant to protect the chemical industry).

¹⁰⁷ See generally TSCA, *supra* note 12, § 2603 (giving the EPA authority to promulgate regulatory rules if the Administrator finds reason to do so).

¹⁰⁸ SCHIEROW, *supra* note 88, at Summary.

¹⁰⁹ TSCA, *supra* note 12, § 2603(a).

¹¹⁰ *Id.*

chemicals into the regulation based upon both quality and quantity.¹¹¹ Accordingly, the EPA may regulate chemicals that pose unreasonable risks to the environment based on the chemical's individual characteristics, as well as chemicals produced in large quantities if their release into the environment is likely.¹¹²

However, to determine whether regulation is necessary, the EPA must acquire relevant information about the chemical's qualities or the quantity of chemicals produced.¹¹³ The EPA can require that manufacturers conduct scientific tests to provide this information.¹¹⁴ TSCA section 4(b) provides that companies that manufacture or possess potentially harmful chemicals "shall be required to conduct tests and submit data."¹¹⁵ If the EPA finds that the chemical poses an unreasonable risk based on this data, the agency can impose a broad range of regulations to minimize the chemical's environmental impact.¹¹⁶ However, the EPA must choose the least burdensome regulatory option by balancing the benefits of the chemical, including the economic benefits, with its potential harm.¹¹⁷ The inclusion of language like "unreasonable risk" and "least burdensome alternatives" indicates congressional acquiescence to the preferences of industry instead of TSCA's environmental objectives.¹¹⁸

Other TSCA provisions also seem deceptively comprehensive and stringent; however, in their application, these provisions dwindle in effectiveness.¹¹⁹ For example, Section 8 requires that producers report all potentially dangerous chemicals to the EPA.¹²⁰ Section 5 requires that producers notify the EPA when producing any new chemicals or using

¹¹¹ *Id.* § 2603(a)(1)(B)(i).

¹¹² SCHIEROW, *supra* note 88, at 2.

¹¹³ *See id.* at 5 (describing TSCA Section 8 provisions requiring the EPA to gather information and granting EPA authority to collect information from industry).

¹¹⁴ *Id.* at Summary.

¹¹⁵ TSCA, *supra* note 12, § 2603(b)(3)(B).

¹¹⁶ SCHIEROW, *supra* note 88, at Summary.

¹¹⁷ *Id.*

¹¹⁸ *See* O'Reilly, *supra* note 13, at 43 (arguing that TSCA never reached its environmental goals due to industry lobbying, which allowed industry to "dodge the bullet"); *see also* Applegate, *supra* note 61, at 730–31 (suggesting that the "unreasonable risk" standard represents Congress's desire to protect the chemical industry).

¹¹⁹ Applegate, *supra* note 61, at 732–33 (describing the shortcomings of §§ 4 and 8 and the regulatory inadequacies created by the distinction between existing and new chemicals); *see* O'Reilly, *supra* note 13, at 43–44 (describing "three failures" of TSCA, which include the "weak and conditional" §§ 6 and 8 provisions on regulation and reporting, and the § 14 data disclosure provision which effectively prevents EPA from releasing pertinent information submitted by industry).

¹²⁰ TSCA, *supra* note 12, § 2607(e).

existing chemicals in new ways.¹²¹ However, the regulatory actions the EPA can take after receiving this information are limited.¹²² Though Section 6 gives the EPA authority to limit or ban the production of dangerous chemicals, the provision only authorizes the EPA to invoke “the least burdensome regulatory approach, even in controlling unreasonable risks.”¹²³ Just as Section 4’s subjective language creates uncertainty and can limit the EPA’s regulatory authority, the “least burdensome” language of Section 6 takes even more enforcement power from the EPA’s ability to effectively regulate chemicals.¹²⁴

C. REACH/TSCA Similarities and Differences

Understanding the similarities and differences between TSCA and REACH is critical for predicting the tenor of TTIP negotiations and the possibility and difficulties of harmonization. Trade negotiators are well aware of the incompatibility between U.S. and EU chemical regulations, so an agreement to harmonize one or both of the systems to simplify trade is conceivable.¹²⁵

Because the imbalance between the U.S. and EU chemical regulatory systems cuts against TTIP’s free trade goals, differences between TSCA and REACH are most germane to the purposes of this Note. In fact, the Europeans based many of REACH’s provisions on the observation of TSCA’s failures.¹²⁶ However, REACH still resembles TSCA in many basic, structural ways.¹²⁷

¹²¹ *Id.* § 2604(a).

¹²² See generally O’Reilly, *supra* note 13, at 44 (explaining that “[c]onstraints on the operation of Sections 5 and 6 of the Act were heavily influenced by industry” and that the 1991 court ruling in *Corrosion Proof Fittings v. EPA*, 947 F.2d 1201 (5th Cir. 1991), “undercut the potency of TSCA” by requiring the EPA to defer chemical control to another federal agency).

¹²³ SCHIEROW, *supra* note 88, at 5.

¹²⁴ See O’Reilly, *supra* note 13, at 44 (“Sections 6 and 8 of TSCA are weak and very conditional.”).

¹²⁵ See SIERRA CLUB, *supra* note 8, at 13–14 (“The USTR has expressed a number of concerns over the EU’s REACH program, signaling that chemical regulatory differences will be on the TTIP negotiating table.”); see also Bernabe-Riefkohl, *supra* note 7, at 212 (explaining that “countries have to ‘harmonize’ their laws to avoid obstructing free trade and economic development, especially as they organize into economic alliances or transnational trading blocs”).

¹²⁶ Applegate, *supra* note 61, at 741.

¹²⁷ See *id.* at 721 (explaining that REACH provisions mirror many of TSCA’s basic regulatory approaches).

1. Similarities

REACH and TSCA have several political, structural, and procedural similarities.¹²⁸ Both REACH and TSCA were enacted after government acknowledgment that the environment was at risk due to insufficient data about chemicals.¹²⁹ REACH and TSCA share broad goals of comprehensive chemical regulation.¹³⁰ Additionally, both regulations arguably take a moderate approach to chemical regulation by balancing the primary goals of environmental protection and human safety with countervailing economic interests.¹³¹ Further, TSCA and REACH each regulate chemicals directly at the source, make initial chemical testing conditional, and make governmental restrictions procedurally complex, often to benefit the chemical industry.¹³²

2. Differences

The structural similarities and parallel goals of REACH and TSCA could simplify the harmonization process, but crucial differences in the regulations also create significant hurdles.¹³³ First, as discussed above, REACH and TSCA rest on different theoretical environmental principles.¹³⁴ The U.S. embraces a science-based “risk assessment” approach, whereas the EU relies more upon the Precautionary Principle.¹³⁵

Second, TSCA and REACH approach burden of proof issues differently.¹³⁶ In TSCA, this difference results in looser regulation and less power for the EPA.¹³⁷ While the burden to produce information showing a new chemical’s safety initially falls on U.S. chemical manufacturers, the

¹²⁸ See generally *id.* at 753–62 (describing various similarities between REACH and TSCA, including the balancing of environmental and economic protection and the creation of more data about chemicals).

¹²⁹ *Id.* at 723.

¹³⁰ *Id.*

¹³¹ *Id.* at 753–54.

¹³² See *id.* at 730–32, 746–47 (explaining the similarities between REACH and TSCA).

¹³³ See generally Wirth, *supra* note 67, at 102–03 (discussing U.S. efforts to block REACH, which could suggest U.S. reluctance to change TSCA provisions that are contrary to REACH).

¹³⁴ See Applegate, *supra* note 61, at 765 (proposing that TSCA reform will require the U.S. to embrace of the Precautionary Principle).

¹³⁵ See Benedetto, *supra* note 71, at 79 (highlighting the difference between U.S. and EU chemical regulatory approaches by explaining that “[t]he European Parliament specifically rejected the United States’ model of chemical regulation by adopting the precautionary principle . . . preempt[ing] complete scientific proof of the harm of a chemical”).

¹³⁶ Applegate, *supra* note 61, at 736–37.

¹³⁷ *Id.*

burden shifts to the EPA to prove, by a substantial evidence standard, that the chemicals present an unreasonable risk to the environment or human health.¹³⁸ Because the EPA cannot compel manufacturers to provide extra information or conduct additional research on the chemical, proving unreasonable risk requires a wealth of information the EPA does not readily possess.¹³⁹ REACH, on the other hand, ultimately places the burden on the chemical industry.¹⁴⁰ Therefore, the ECHA can prove a chemical is too dangerous for manufacture, sale, or distribution under a less stringent standard.¹⁴¹ As a result, the EPA has less power to curb dangerous chemical production in comparison to the ECHA.¹⁴²

Another important difference is the regulations' treatment of new and existing chemicals. TSCA gives the EPA little power over chemicals that existed before TSCA's enactment, limiting EPA oversight on 99% of the chemicals in commerce.¹⁴³ However, new chemicals must undergo pre-manufacture notice, which requires manufacturers to present data regarding new chemicals and new uses of existing chemicals.¹⁴⁴ Conversely, REACH's provisions apply equally to new and existing chemicals, sweeping all chemicals into the regulation.¹⁴⁵ Only chemicals produced in quantities of less than one ton per year escape regulation under REACH.¹⁴⁶ While REACH and TSCA exhibit some similarities, these differences suggest a need for harmonization¹⁴⁷ because having one uniform standard would make chemical production more efficient.¹⁴⁸

¹³⁸ *Id.*

¹³⁹ *See id.* at 735–36 (stating that “EPA must take what [information] it is given” because TSCA’s pre-manufacture notice provision “does not require the creation of any new safety data”).

¹⁴⁰ *See id.* at 745–46.

¹⁴¹ *See generally id.* (explaining that under REACH, manufacturers bear a heavier burden than the ECHA because “the party with the burden must move the status quo”).

¹⁴² *See id.* (comparing the EPA’s burden of proof which “clearly contributes to TSCA’s ineffectiveness,” to REACH’s burden of proof).

¹⁴³ *Id.* at 731–32.

¹⁴⁴ *Id.* at 727.

¹⁴⁵ *Id.* at 743–44.

¹⁴⁶ *Id.*

¹⁴⁷ *Id.* at 752–53 (noting that “TSCA is clearly overdue for reform” and that U.S. businesses will have to comply with REACH to maintain access to the European market).

¹⁴⁸ *See* Donahue, *supra* note 11, at 365 (explaining that differences in domestic environmental standards can restrict international trade by raising the costs of international business).

V. REACH'S CONSISTENCY WITH INTERNATIONAL TRADE LAW

The previous sections argue that REACH is the superior environmental response to chemical regulation. However, a holistic analysis of the REACH program in the context of TTIP negotiations must also consider the international economic impact of REACH.

Even under the normative assumption that REACH is a superior regime, the United States currently does not have a direct incentive to change its chemical regulatory system. Just because the Europeans choose a certain level of human health and environmental protection does not automatically suggest that other sovereign nations could or should enact similar policies.¹⁴⁹ Nevertheless, both direct and indirect forces may bring sovereign nations' laws closer together.¹⁵⁰

A phenomenon referred to as "The California Effect" could indirectly encourage and foster regulatory harmonization.¹⁵¹ The "California Effect" occurs when one large market participant demands that certain standards be met, and other markets acquiesce to those demands to obtain access to the large market.¹⁵² For example, California, as the most populous state, is a huge contributor to the U.S. economy with high environmental standards.¹⁵³ Companies not based in California often alter their manufacturing methods to meet California's environmental standards and gain access to the huge California market.¹⁵⁴ As a matter of efficiency, these non-California companies often apply the changes across the board because applying one standard becomes cheaper than having multiple standards.¹⁵⁵ Therefore,

¹⁴⁹ *But see* Stephen Zamora, *NAFTA and the Harmonization of Domestic Legal Systems: The Side Effects of Free Trade*, 12 ARIZ. J. INT'L & COMP. L. 401, 407 (1995) (suggesting that harmonization in the context of trade agreements and international economic integration is crucial because "the establishment of a successful economic community . . . require[s] harmonization of national laws").

¹⁵⁰ *See id.* at 402 (providing, through the example of the North American Free Trade Agreement (NAFTA), that interaction between countries through free trade agreements can foster harmonization of domestic laws).

¹⁵¹ Wirth, *supra* note 67, at 96–97 (describing the "California Effect").

¹⁵² *Id.*

¹⁵³ *U.S. and World Population Clock*, UNITED STATES CENSUS BUREAU (Dec. 20, 2013), http://www.census.gov/popclock/?intcmp=home_pop; *see also* Patricia Weisselberg, *Shaping the Energy Future in the American West: Can California Curb Greenhouse Gas Emissions from Out-of-State, Coal-Fired Power Plants Without Violating the Dormant Commerce Clause?*, 42 U.S.F. L. REV. 185, 189 (2007) ("California has long recognized and accepted its role as a leader in environmental regulation.").

¹⁵⁴ *See* Wirth, *supra* note 67, at 96–97 (outlining the typical decision making process that results in companies acquiescing to California environmental standards).

¹⁵⁵ *Id.*

California's higher environmental standards can inadvertently replace weaker environmental standards in other states, simply because private companies wish to access the large California market.¹⁵⁶

However, the "California Effect" is not foolproof. In the U.S. context, out-of-state entities may challenge stringent environmental laws as unconstitutional under the dormant commerce clause.¹⁵⁷ In the international context, governments may protest high environmental standards of other WTO-member countries as nontariff barriers to trade if they believe those standards result in discrimination between domestic and foreign products or act as unnecessary obstacles to trade.¹⁵⁸ As a result, the nation in question should be ready to defend its environmental regulation under WTO standards. Fortunately, REACH is consistent with WTO law. Therefore, with or without TTIP negotiations, the U.S. should aspire to reform TSCA to meet REACH-like environmental standards.¹⁵⁹ However, the U.S. also has the unique incentive to simplify and foster trade with the EU by harmonizing U.S. chemical regulatory standards with REACH standards.¹⁶⁰ While simpler mechanisms are available which could achieve the same level of trade,¹⁶¹ the U.S. can accomplish two goals at once with upward harmonization.¹⁶² As advocated above, TTIP presents an unprecedented opportunity for two economic giants to enhance environmental protection through a free trade agreement, instead of placing the two fields in their traditional opposition to one another.

¹⁵⁶ *Id.*

¹⁵⁷ Weisselberg, *supra* note 153, at 186 (describing the dormant commerce clause challenge to California Senate Bill 1368, which aims to reduce greenhouse gas emissions in California by restricting imports of electricity from out-of-state, coal-fired electric plants).

¹⁵⁸ See Kogan, *supra* note 66, at 501 (explaining that "the EU has recognized that the REACH's length and complexity and the new legal obligations it imposes present real compliance challenges for industries that have affected international trade in chemical substance-based products . . .").

¹⁵⁹ See SIERRA CLUB, *supra* note 8, at 13–14 (describing shortcomings of TSCA in comparison to REACH and advocating United States adoption of REACH-like standards).

¹⁶⁰ See generally *id.* at 21 ("The public, the environment, and the economies of Europe and the United States could potentially benefit from a trade pact that . . . encourages trade and investment without sacrificing the health and safety of the public.").

¹⁶¹ See Donahue, *supra* note 11, at 370 (describing the "equivalence model" of harmonization which only requires acceptance of another nation's standards, as opposed to requiring substantive changes of the law).

¹⁶² See SIERRA CLUB, *supra* note 8, at 21 (suggesting that a trade agreement like TTIP can potentially enhance environmental protection).

A. TBT Agreement

Before the U.S. undertakes chemical regulatory reform, the U.S. must ensure that any regulatory change would not violate GATT standards, which bind the U.S. as a WTO member. The fact that no WTO member has formally challenged REACH is a good indicator that REACH is not a blatant violation of WTO rules.¹⁶³ However, a legal challenge could arise in the future, as many countries have expressed concerns about the regulation since 2006.¹⁶⁴ The mandates of REACH, particularly the registration and data-gathering requirements and potential total market bans, could create an adverse impact on the economies of other countries wishing to sell chemicals in the European market.¹⁶⁵

If a dispute arises, purely political restraints could discourage the WTO Dispute Settlement Body (DSB) from attempting to invalidate provisions of REACH.¹⁶⁶ Much of the WTO's institutional legitimacy hinges on allowing its members to make domestic noneconomic policy without interference from a politically unaccountable international organization.¹⁶⁷ Therefore, the WTO could compromise its international clout if it consistently ruled against members' important environmental policies in favor of trade.¹⁶⁸ Because the WTO's institutional legitimacy depends upon sovereign member states'

¹⁶³ Kogan, *supra* note 66, at 510–14 (outlining the reasons REACH has thus far been deemed compliant with WTO standards: the EU notified the WTO and WTO members ahead of time about the regulatory changes, facilitated notice-and-comment to WTO members on REACH provisions, incorporated many of those comments, and engaged in bilateral consultations with concerned countries).

¹⁶⁴ *See id.* at 501 (stating that “as of November 10, 2011, thirty-four WTO Members had expressed specific trade concerns about the EU REACH regulation.” Further, WTO Secretariat report cited REACH concerns as “most frequently raised by the greatest number of Members.”).

¹⁶⁵ *See id.* at 514–15 (outlining various present complaints about REACH including stringent registration requirements and potential discriminatory treatment).

¹⁶⁶ *See generally* Sungjoon Cho, *Linkage of Free Trade and Social Regulation: Moving Beyond the Entropic Dilemma*, 5 CHI. J. INT'L L. 625, 651–52 (2005) (noting the WTO DSB's shift from examining the content of noneconomic regulations to focusing on the application of the regulation after the former practice “infuriated domestic policymakers and thus diminished their perception of GATT's legitimacy”).

¹⁶⁷ *See* Sidney A. Shapiro, *International Trade Agreements, Regulatory Protection, and Public Accountability*, 54 ADMIN. L. REV. 435, 450 (2002) (stating that the WTO is politically unaccountable due to the lack of public participation and transparency in dispute resolution); *see generally* Cho, *supra* note 166, at 673 (stating that “the mounting tension between trade and [noneconomic] values [can] undermine the legitimacy of the global trading system”).

¹⁶⁸ *See generally* Cho, *supra* note 166, at 626 (describing mass protests by environmentalists at the Seattle Round that accused the WTO of placing economic concerns over environmental protection).

voluntary acquiescence to its authority,¹⁶⁹ the WTO is likely to approach any challenge to domestic environmental regulation prudently, including a challenge to REACH.

While political restraints indirectly shape the interaction between domestic environmental law and international trade law, the “Technical Barriers to Trade” Agreement (TBT)¹⁷⁰ provides a more direct, textual analysis of the relationship. The TBT Agreement is an international agreement supplementing GATT, which establishes rules and procedures regarding the development, adoption, and application of mandatory technical regulations and voluntary standards for products and the procedures (such as testing or certification) for determining whether a particular product meets such regulations or standards.¹⁷¹

The TBT Agreement governs a wide array of product regulations, which can include labelling, safety, and recycling requirements, just to name a few.¹⁷² One of the TBT Agreement’s main goals is to uphold WTO members’ right to protect their environment, while preventing members from using environmental regulations to inhibit trade.¹⁷³ REACH involves mandatory registration and information-gathering requirements directly affecting chemicals and products containing chemical substances in the interest of health and environmental protection.¹⁷⁴ Therefore, if a challenge to REACH arises, it will most naturally fit under the TBT Agreement.¹⁷⁵ Because the TBT agreement attempts to balance the goals of trade liberalization and promotion of members’ sovereign rights to regulate, the WTO would find the regulation TBT-consistent if REACH has a legitimate purpose and does not discriminatorily burden or unnecessarily restrict international trade.¹⁷⁶ Complaining members would then have to submit to the regulation for access to the EU chemical market.¹⁷⁷

¹⁶⁹ See Joshua Meltzer, *State Sovereignty and the Legitimacy of the WTO*, 26 U. PA. J. INT’L ECON. L. 693, 693 (2005) (explaining that state consent to joining the WTO and following WTO rules creates much of the WTO’s legitimacy).

¹⁷⁰ Agreement on Technical Barriers to Trade, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1868 U.N.T.S. 120 [hereinafter TBT Agreement].

¹⁷¹ Kogan, *supra* note 66, at 495.

¹⁷² TBT Agreement, *supra* note 170, at Annex 1.1.

¹⁷³ Kogan, *supra* note 66, at 496.

¹⁷⁴ REACH, *supra* note 3, art. 5; *id.* at intro. (19).

¹⁷⁵ Kogan, *supra* note 66, at 495.

¹⁷⁶ *Id.* at 496.

¹⁷⁷ *Id.*

A comprehensive TBT analysis is beyond the scope of this Note and has been covered by other commentators.¹⁷⁸ However, this discussion of REACH's consistency with the TBT outlines additional non-environmental incentives for the U.S. to harmonize its standards with EU standards. First, if REACH can withstand legal scrutiny at the WTO, then the U.S. will ultimately have to submit to the EU law anyway.¹⁷⁹ Furthermore, harmonizing TSCA with REACH could streamline trade since the chemical industry would only have to follow one standard.¹⁸⁰ In this context, harmonization would provide both environmental and economic benefits to the U.S. For these reasons, REACH's compliance with the TBT may be of special interest to the U.S., especially in light of recent TTIP negotiations.

A TBT analysis of REACH would ultimately focus on two major issues. The first issue is whether REACH engenders protectionism, meaning it discriminates against foreign chemicals in order to unfairly benefit the EU's chemical industry.¹⁸¹ The second separate but related issue is whether REACH is an unnecessary obstacle to international trade.¹⁸²

As a threshold matter, the WTO DSB would determine whether REACH is subject to the TBT Agreement.¹⁸³ REACH would fall under the TBT Agreement if the law is a technical regulation.¹⁸⁴ Technical regulations are documents mandating that an identifiable product (or group of products) conforms to rules regarding the product's intrinsic characteristics or product-related characteristics.¹⁸⁵ Examples of these types of rules include requirements that products bearing certain labels be produced in an environmentally responsible manner or not contain certain additives or ingredients.¹⁸⁶

¹⁷⁸ *Id.* at 556–662.

¹⁷⁹ *See id.* at 668 (reiterating that the WTO DSB will not rule against necessary, nondiscriminatory regulations even if those measures restrict trade).

¹⁸⁰ *See* Donahue, *supra* note 11, at 373 (demonstrating the economic benefit of harmonization by describing efforts of the Transatlantic Business Dialogue, a business group consisting of U.S. and EU corporations, to eliminate U.S.–EU regulatory differences to promote trade).

¹⁸¹ *See* Kogan, *supra* note 66, at 532 (describing the TBT discrimination analysis under Article 2.1).

¹⁸² *Id.* at 605 (describing the TBT trade-restrictiveness analysis under Article 2.2).

¹⁸³ *Id.* at 567–68 (describing the first step of a TBT analysis under Annex 1.1).

¹⁸⁴ *Id.*

¹⁸⁵ TBT Agreement, *supra* note 170, at Annex 1.1.

¹⁸⁶ *See generally* Kogan, *supra* note 66, at 524–66 (analyzing the contested TBT measures in *U.S.–COOL*, *U.S.–Clove Cigarettes*, and *U.S.–Tuna II*).

The second question, and first major issue, would be whether REACH is “trade discriminatory.”¹⁸⁷ Trade discrimination would occur if the EU used REACH to treat chemicals produced outside the EU differently than similar chemicals produced in an EU country.¹⁸⁸ This kind of discrimination is conceivable. For example, if a chemical produced predominately in the EU passed the regulatory phases of REACH, while a “like” chemical (a non-EU chemical containing similar physical properties, with similar end-uses and tariff classifications, which is generally perceived and used similarly by consumers) was deemed too dangerous for sale on the European market, a country could bring and win a TBT claim.¹⁸⁹

The third question, and second major issue, is whether REACH is an “unnecessary obstacle to trade that is more trade-restrictive than necessary to fulfill a legitimate objective.”¹⁹⁰ This question is a related, but subsequent inquiry to the discrimination analysis. This analysis focuses more upon the competitive relationship between like products and the purpose of the regulation itself, as opposed to focusing primarily on the products’ similarities.¹⁹¹ Here, the DSB would examine whether REACH’s purpose is truly environmental protection or whether the EU had ulterior motives in enacting the law.¹⁹² The DSB would look at REACH’s stated purposes, whether REACH fulfills those purposes, and whether REACH unfairly alters competition in the chemical marketplace.¹⁹³ If less trade-restrictive alternatives are available to the EU which would accomplish the same level of environmental protection, then REACH would violate the TBT Agreement.¹⁹⁴

The TBT Agreement also requires that WTO members harmonize their technical regulations with international standards by basing their domestic rules on those international standards.¹⁹⁵ However, if a WTO member

¹⁸⁷ *Id.* at 530.

¹⁸⁸ *See id.* at 532 (describing the “national treatment” obligation in Article 2.1 of the TBT Agreement, which prohibits protectionist measures favoring domestic products over foreign-produced products).

¹⁸⁹ *See id.* at 532, 570–71 (outlining the four elements of a “likeness” analysis under the TBT Agreement and summarizing a likeness analysis of REACH-registered and non-REACH registered chemicals and products containing chemicals).

¹⁹⁰ *Id.* at 547.

¹⁹¹ *Id.* at 547–48.

¹⁹² *See id.* at 550 (stating that the DSB will look at “the regulation’s text as well as its design, architecture, and structure” in determining its true purpose).

¹⁹³ *See id.* at 549–55 (describing the “legitimate objective” analysis).

¹⁹⁴ *See generally id.* at 557–88 (describing the WTO DSB’s analysis of potentially less trade restrictive alternatives).

¹⁹⁵ TBT Agreement, *supra* note 170, art. 2.4.

desires to promulgate a technical regulation not based upon an international standard, this standard may withstand scrutiny if the member transparently enacts the technical regulation by notifying other WTO members.¹⁹⁶ In this instance the EU provided notification even before REACH's enactment and accepted and implemented changes from public comments.¹⁹⁷ Whether REACH strictly adheres to an international standard or not, these actions support REACH's legality under the TBT Agreement.¹⁹⁸

As noted above, political pressure could compel WTO DSB deference to the EU's environmental policy preferences.¹⁹⁹ More importantly, recent WTO jurisprudence suggests that the DSB would likely defer to the EU's policy choices if a reasonable basis to restrict the chemicals from the market exists, such as public health or environmental protection.²⁰⁰ For example, some commentators have noted a "shift" in WTO jurisprudence regarding countries' risk assessment analysis.²⁰¹ Often, a product's "risk"—which can affect whether the product is "like" another product—is determined based on quantitative risk assessment procedures.²⁰² However, the WTO DSB is increasingly recognizing qualitative risk assessment as sufficient to justify trade-restrictive measures.²⁰³ This apparent shift indicates that the EU could potentially succeed in a dispute by arguing that REACH-registered chemicals and non-REACH-registered chemicals are not "like" if consumers prefer REACH-registered chemicals/products over non-REACH-registered chemicals/products.²⁰⁴ While a definitive conclusion of REACH's TBT legality would be premature at this time, recent trends and political factors indicate that REACH is likely to withstand scrutiny under WTO law.

¹⁹⁶ *Id.* art. 2.9; Kogan, *supra* note 66, at 498.

¹⁹⁷ Kogan, *supra* note 66, at 500–01.

¹⁹⁸ *See id.* at 606 (stating that "the TBT notifications the EU submitted to the WTO TBT Committee concerning REACH in advance of and subsequent to its adoption . . . enjoy a rebuttable presumption of truthfulness and good faith").

¹⁹⁹ *See supra* text accompanying notes 166–69.

²⁰⁰ *See* Kogan, *supra* note 66, at 582 (suggesting that the WTO would recognize the EU's product distinctions between REACH-registered products and non-registered products).

²⁰¹ *See id.* at 578–82 (discussing the WTO's shift from requiring quantitative risk assessment to recognizing qualitative risk assessment in SPS Agreement disputes, which suggests that qualitative risk assessment will be sufficient for justifying measures under the less stringent TBT Agreement).

²⁰² *See id.* at 575–76 (describing the unsuccessful argument by Canada in EC–Asbestos that quantitative risk assessment is the proper method of evaluating a product's risk).

²⁰³ *See id.* at 576 (noting the WTO Appellate Body's statement in the EC–Asbestos case that "[a] risk may be evaluated either in quantitative or qualitative terms").

²⁰⁴ *See id.* at 611–12 (stating that recent jurisprudence "appear[s] to confirm in the TBT context . . . the WTO's gradual shift from the traditional quantitative risk-assessment model toward a more holistic semi-quantitative/qualitative risk model").

B. Harmonization

Assuming that REACH is legal under the TBT Agreement, the next question is whether to harmonize U.S. chemical regulations with REACH at all, and if so, how to harmonize. As noted before, harmonization would be in the United States' best interest from an environmental perspective because TSCA regulates chemicals poorly.²⁰⁵ In addition to the environmental angle, the United States could also further TTIP's free trade goals by aligning its standards with REACH standards.²⁰⁶ Despite the potential environmental and trade benefits, harmonization is politically difficult.²⁰⁷ Implementing new and different standards is also challenging on a practical level.²⁰⁸

Multiple types of harmonization and methods of implementation exist.²⁰⁹ The two basic types of harmonization are "full" harmonization and "equivalence" harmonization.²¹⁰ Full harmonization occurs when countries adjust their regulations until they are the same.²¹¹ Equivalence harmonization occurs when countries make no substantive changes in the law, only agreeing that one standard is substitutable for the other standard.²¹² This Note calls for full harmonization, but full harmonization may go three ways: up, down, or a compromise in the middle.²¹³

Full upward harmonization occurs when a country with lower environmental standards raises them to match another country's higher environmental standards.²¹⁴ For example, if the U.S. changes TSCA to match REACH, full upward harmonization will occur. Full downward harmonization occurs when a country with high environmental standards lowers them to match a country with lower standards.²¹⁵ If the EU changed

²⁰⁵ See *supra* text accompanying note 93.

²⁰⁶ See Bernabe-Riefkohl, *supra* note 7, at 212 ("[G]iven the disparity of regulations, countries have to 'harmonize' their laws to avoid obstructing free trade and economic development, especially as they organize into economic alliances or transnational trading blocs.").

²⁰⁷ See Donahue, *supra* note 11, at 381 (describing interest group objection and legal complexity as roadblocks to prior harmonization efforts by the U.S. and EU).

²⁰⁸ See *id.* ("[I]mplementation of the [U.S.–EU MRA Agreement] was stalled due to continuing difficulties with budgeting, pointed inquiries and scrutiny by Congress, and apparent foot-dragging of regulatory officials.").

²⁰⁹ Esty & Geradin, *supra* note 16, at 282–83 (noting that harmonization efforts usually fall into two broad categories, which consist of several different techniques).

²¹⁰ Donahue, *supra* note 11, at 369.

²¹¹ *Id.* at 365.

²¹² *Id.*

²¹³ *Id.* at 369.

²¹⁴ *Id.*

²¹⁵ *Id.*

REACH to match TSCA, full downward harmonization would occur. Intermediate harmonization occurs when each country compromises to create a completely new standard.²¹⁶ If the United States and the EU negotiate a totally new standard to eliminate regulatory differences, they will be engaging in intermediate harmonization. A fourth, but less environmentally desirable option is equivalent harmonization.²¹⁷ The EU could simply agree to accept TSCA standards as equal to REACH standards by signing an equivalency agreement.²¹⁸

While this Note suggests full upward harmonization, history suggests the U.S. and EU are likely to opt for the fourth option—equivalent harmonization.²¹⁹ In 1997, the U.S. and the EU signed the Mutual Recognition Agreement (MRA), which is an equivalence agreement governing six product sectors.²²⁰ Significantly, the U.S.-EC MRA establishes that the U.S. and EU will accept one another's procedural standards as equivalent, while their substantive domestic standards will remain unchanged.²²¹

The nature of the agreement could implicate REACH in the following ways. First, the chemical sector is not covered under the U.S.-EC MRA, so REACH-TSCA harmonization is not automatically subject to the MRA's equivalency standard.²²² Second, however, the U.S. and EU could amend the MRA to include the chemical sector.²²³ Nevertheless, even if the nations add chemicals as a sector to the MRA harmonization agreement, REACH would not be implicated unless it is purely a procedural regulation.²²⁴ Negotiators could reasonably construe REACH as a procedural regulation since the core of the regulation focuses on registration and information-gathering.²²⁵

²¹⁶ *Id.*

²¹⁷ *See id.* at 370–71 (stating that equivalence harmonization creates “dangerous and unacceptable results” regarding environmental standards).

²¹⁸ *See id.* at 380 (explaining a prior equivalency agreement between the U.S. and EU).

²¹⁹ *Id.* at 373 (“[P]rofessional harmonizers of the European Union have worked closely with U.S. trade officials since the late 1980s to develop equivalence as the main method of harmonization between the two.”).

²²⁰ *Id.* at 379.

²²¹ *Id.* at 379–80.

²²² *See id.* at 379 (noting that the U.S.-EC MRA covers “telecommunications equipment, electromagnetic compatibility, electrical safety, recreational craft, pharmaceutical good manufacturing practices, and medical devices”).

²²³ *Id.* at 382 (noting that a business interest group has lobbied to add chemical products as a U.S.-EC MRA sector).

²²⁴ *Id.* at 380 (suggesting that the language of the U.S.-EC MRA does not cover “technical regulations” that operate as substantive standards, but only equalizes “systems and practices”).

²²⁵ *See supra* notes 61–68 (describing the registration and information-gathering requirements of REACH).

However, if REACH's registration and testing requirements affect consumer tastes and habits, thereby altering the competitive nature of the chemical products, then REACH could more readily be seen as regulating the sale of safe vs non-safe chemicals and chemical products.²²⁶ Therefore, negotiators could also portray REACH as a substantive regulation not covered by the MRA.²²⁷

Whether or not the U.S.-EC MRA could ultimately solve the harmonization problem between TSCA and REACH, past negotiating practices suggest that the two nations use the equivalency method to achieve regulatory harmonization.²²⁸ Even if the U.S. and EU were to decide against specifically using the MRA to bridge the chemical regulatory gap, they could negotiate a similarly structured agreement specifically for TTIP. Alternatively, they could include within TTIP a side agreement declaring that the EU accepts U.S. standards as equivalent with REACH standards. Similarly, TTIP negotiators could agree to establish a dispute resolution system specifically for TTIP, in which environmental disputes would be solved without fusing environmental standards. While these methods of equivalent harmonization could successfully liberalize the chemical trade by functionally eliminating regulatory trade barriers, full upward harmonization would achieve the same economic goals, while also enhancing U.S. environmental and health protection.²²⁹

Though equivalent harmonization is admittedly the easier, more politically viable option,²³⁰ full upward harmonization is preferable and possible. The EU already confirmed that it will not compromise its environmental/health standards for TTIP.²³¹ Relying on equivalence harmonization of REACH and TSCA would compromise the environmental goals of REACH.²³² If TSCA's standards were declared an adequate substitute, EU importers would no longer be required to register U.S. chemicals, meaning these chemicals would not be subject to REACH's

²²⁶ See Kogan, *supra* note 66, at 547–48.

²²⁷ *But see* Donahue, *supra* note 11, at 380–81 (suggesting that the MRA could be amended to cover both procedural and substantive regulations, which would subject both types of regulations to equivalent harmonization).

²²⁸ *Id.* at 373.

²²⁹ *See id.* at 367–68 (stating that the purpose of harmonization is “economic integration and the reduction of trade barriers” and that “harmonization . . . increases market accessibility, reduces costs . . . and boosts overall growth” and can “lead to improved environmental protection”).

²³⁰ *Id.* at 382–83.

²³¹ *See supra* text accompanying note 52.

²³² *See* Donahue, *supra* note 11, at 371 (arguing that equivalence harmonization does not protect the environment).

further evaluation and testing requirements.²³³ Since the vast majority of U.S. chemicals escape the EPA's scrutiny and the U.S. is a major chemical exporter, equivalent harmonization would not satisfy REACH's health and environmental protection requirements.²³⁴ Further, the EU is accustomed to aiming for and achieving upward harmonization within its own borders.²³⁵ Therefore, the EU is probably optimistic about full upward harmonization. In the WTO context, the TBT Agreement requires harmonization with international standards, and also contemplates harmonization between countries in TBT Article 2.7.²³⁶ While Article 2.7 suggests countries engage in equivalence harmonization, the language does not affirmatively restrict full upward harmonization.²³⁷ Furthermore, as discussed above, WTO membership does not directly curb the United States' right to adopt and change its own domestic policies.²³⁸ Finally, while full upward harmonization is generally the most challenging harmonization technique, it is more feasible between similarly developed governments like the U.S. and EU²³⁹ Though the EU is often perceived as having comparatively higher environmental standards,²⁴⁰ the United States also aspires to employ high environmental standards, so harmonization in this area is politically and technically possible.

VI. CONCLUSION

The United States and the European Union have a unique opportunity to meet two equally important goals through TTIP. First and foremost, TTIP is a bilateral trade agreement that can enhance and ease economic interactions between two huge economies, thereby improving standards of living for

²³³ See *id.* at 371 (describing the “back door” effect of equivalent harmonization in which foreign products escape regulation).

²³⁴ See *supra* text accompanying notes 79, 82–84.

²³⁵ See Donahue, *supra* note 11, at 368 (noting that in developing one internal market, the EU member states are “the most successful practitioners of harmonization” and that many EU member states have strengthened their domestic environmental laws as a result).

²³⁶ TBT Agreement, *supra* note 170, art. 2.7; Donahue, *supra* note 11, at 367, 376.

²³⁷ Donahue, *supra* note 11, at 376–77.

²³⁸ See *supra* text accompanying note 173 (noting that the TBT Agreement contemplates that members maintain the right to enact legitimate environmental protection measures).

²³⁹ Donahue, *supra* note 11, at 384; Press Release, Office of the United States Trade Representative, *supra* note 46 (stating that the U.S. and EU have “two of the more similar and advanced” economies).

²⁴⁰ See Wirth, *supra* note 67, at 91 (stating that Europe has tightened its environmental regulations while the United States has deregulated in recent years).

United States and European Union citizens.²⁴¹ Second, TTIP could also serve as a tool to effectuate other legitimate goals, including better environmental protection.²⁴² Further, using TTIP as a tool to achieve more comprehensive chemical regulation in the world's two largest economies could prompt a "California Effect" in which other nations would voluntarily adjust their chemical regulatory standards to meet those of the European Union and the United States to gain access to their markets. This type of economic and environmental cooperation could shift the way the international community views the interaction between trade and the environment and, hopefully, open the door to further international environmental cooperation in the future.²⁴³ While TTIP's economic goals can be accomplished through simpler means such as equivalence harmonization, the better option is for the United States to fully harmonize upward, creating freer trade flows between the two nations while also better protecting the U.S. environment.²⁴⁴

Full upward harmonization between REACH and TSCA is an ambitious, but needed undertaking. As stated by the USTR, "[t]he challenges posed by efforts to improve regulatory cooperation between the European Union and the United States should not be underestimated. But there are reasons to be optimistic."²⁴⁵

²⁴¹ See *supra* text accompanying notes 5–6.

²⁴² See SIERRA CLUB, *supra* note 8, at 21 (arguing that TTIP can benefit communities economically and environmentally if approached in a new way).

²⁴³ See Wirth, *supra* note 67, at 102 (stating that REACH could represent the international version of a California Effect by encouraging worldwide upward harmonization).

²⁴⁴ SIERRA CLUB, *supra* note 8, at 6 (proposing that downward harmonization jeopardizes human and environmental health).

²⁴⁵ Trade Representative, Office of the United States, *Promoting U.S. EC Regulatory Compatibility* (Sept. 28, 2012), <https://www.federalregister.gov/articles/2012/09/28/2012-23613/promoting-us-ec-regulatory-compatibility>.