COST & BENEFIT ANALYSIS OF THE UNITED STATES' WITHDRAWAL FROM THE PARIS AGREEMENT

- *Carolina Arlota*[*]

I. INTRODUCTION

What are the benefits and costs associated with the United States withdrawing from the Paris Agreement on climate change? This note approaches this question focusing on the advantages and disadvantages for the United States while considering its global impact and the moral dimensions involved. This work is unique, because it considers this United States' controversial decision from this law and economics perspective. This note also advances our understanding about membership in the Paris Accord, as it compares the United States' withdrawal with the engagement of India.

Scientific consensus relates climate change to global warming, which has among its human-induced causes the accumulation of greenhouse gases (GHG) in the atmosphere.[1]The United Nations Framework Convention on Climate Change (UNFCCC), an international agreement signed at the Rio Earth Summit 92 and which entered into force in 1994, aimed at the stabilization of greenhouse gas emissions.[2] In 2015, the Twenty First Conference of Parties of the United Nations Framework Convention on Climate Change enacted the Paris Agreement.[3] This Accord aims at containing the rising of the global average temperature to well below 2C

*Carolina Arlota is a Visiting Assistant Professor at the University of Oklahoma, College of Law. Contact address: carolarlota@ou.edu

[1]For an overview about the Paris Accord: Izzet Ari and Ramazan Sari, *Differentiation of Developed and Developing Countries for the Paris Agreement,* 18 ENERGY STRATEGY REVIEWS 175, 175-176 (2017).

[2]The full text of the United Nations Framework Convention on Climate Change (UNFCCC),https://unfccc.int/resource/docs/convkp/conveng.pdf

[3]The scientific consensus regarding the existence of climate change and necessity of mitigation was a relevant part of discussion at the UNFCCC. JOHN HOUGHTON, SCIENCE AND INTERNATIONAL ENVIRONMENTAL POLICY: THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (Cambridge University Press 2009);RICHARD REVESZ, PHILIPPE SANDS and RICHARD STEWART, *in* ENVIRONMENTAL LAW, THE ECONOMY AND SUSTAINABLE DEVELOPMENT 355-357 (Cambridge University Press 2001).

above pre-industrial levels, while advancing efforts to cap the temperature increase to 1.5 C above pre-industrial levels.[4] The United States has been actively involved in the negotiation and approval of the Paris Agreement, with former President Obama calling it a tribute to American leadership.[5]

In June 2017, President Trump announced that the United States would be "getting out" of the Paris Climate Accord.[6] Former President Obama wasted no time, and fiercely defended the Agreement.[7] The United States' withdrawal, which will only be effective in 2020,[8] has been a contentious topic even before its official announcement by President Trump, due to the goals of the Paris Agreement, namely, to reduce greenhouse gases in the atmosphere. Despite the general scientific consensus referred above, some U.S. politicians remain skeptical about the existence of global warming itself.[9] Notwithstanding this skepticism, CEOs of major U.S. companies[10] and

[4]Article 2 of the Paris Accord determines: (1). This Agreement, in enhancing the implementation of the Convention, including its objective, aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by: (a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change. The full text of the Paris Accord can be found at: https://unfccc.int/sites/default/files/english_paris_agreement.pdf.

[5]The White House, Office of the Press Secretary, Statement by the President on the Paris Climate Agreement (Dec. 12, 2015), available at: https://obamawhitehouse.archives.gov/the-press-office/2015/12/12/us-leadership-and-historic-paris-agreement-combat-climate-change. It is noteworthy that U.S. leadership during the Obama years used soft power, with the installation, in 2008, of air quality monitors in the U.S. embassy in Beijing and tweeting about the data. Hence, for the first time in China there was public available information about the levels of dangerous pollutants and they were tweeting about it. See: David Roberts, *How the U.S. Embassy Tweeted to Clear Beijing's Air,* Wired Opinion (Jun. 3, 2015).

[6]Donald Trump, Statement by President Trump on the Paris Climate Accord (Jun. 01st, 2017), available at: https://www.whitehouse.gov/briefings-statements/statement-president-trump-paris-climate-accord/.

[7]Philip Rucker and Jenna Johnson, Trump Announces U.S. will leave Paris Climate Deal, Sparking Criticism at Home and Abroad , The Washington Post, Sept. 5, 2017, also stressing that Rex Tillerson, the U.S. Secretary of State at the time, was against the withdrawing: https://www.washingtonpost.com/politics/trump-to-announce-us-will-exit-paris-climate-deal/2017/06/01/fbcb0196-46da-11e7-bcde-.

[8]In accordance with the timeframe determined by Article 28 of the Paris Accord, *supra* note 4.

[9]President Trump, in a Tweeter dating from November 06, 2012, called climate change a "hoax" invented by China to undermine the competitiveness of U.S. manufacturing. The tweet is available on line at the following link: https://twitter.com/realDonaldTrump/status/265895292191248385.

[10]Some of the major U.S. companies are active in trying to revert the effect of the U.S. withdrawal: Richard Luscombe, Top U.S. firms including Walmart and Ford oppose Trump on Climate Change (Dec. 1, 2017); https://www.theguardian.com/environment/2017/dec/01/trump-climate-change-paris-withdrawal-ford-walmart jobs?utm_campaign=SocialFlow&utm_source=Twitter&utm_medium=AP_Politics.

members of both political parties have criticized the withdrawal.[11] European leaders strongly condemned President Trumps' decision.[12]

Adding to the controversy is the nature of climate change itself as a collective problem. This is the case, because the benefits of carbon abatement cannot be restricted to those who contributed to it; nor will climate change affect only those who contribute to create it. Following this line of reasoning, the involved parties have incentives to free ride.[13] Climate change governance, thus, is notoriously difficult. The challenges are exacerbated because of the division of powers in the international system, with top-down bargaining not being a realistic course of action.[14] In addition, cognitive uncertainty about the feasibility of achieving policy outcomes, such as lowering carbon emissions, at acceptable costs contribute to increase difficulty when bargaining.[15]

In light of the above, this note contends that the United States' withdrawal from the Paris Accord is not aligned with cost-benefit analysis grounded on the normative use of economics.[16] Hence, this note builds on the notion of cost-benefit analysis being used to improve the environment,[17] while also considering wealth maximization. In this vein, the normative utility of cost-benefit analysis is present, by clarifying governments' choices, making those more transparent as it aims to isolate government's decisions from interest-group politics.[18]

[11]Rucker and Johnson, *supra* note 2.
[12]In a joint statement, German Chancellor Angela Merkel, Italian Prime Minister Paolo Gentiloni and French President Macron firmly rebutted President Trump's intention to renegotiate the Paris agreement, stating the following: "We deem the momentum generated in Paris in December 2015 irreversible, and we firmly believe that the Paris agreement cannot be renegotiated, since it is a vital instrument for our planet, societies and economies." This joint statement is available at: https://www.theguardian.com/environment/2017/jun/01/trump-withdraw-paris-climate-deal-world-leaders-react.

[13]MICHAEL J. TREBILCOCK, DEALING WITH LOSERS: THE POLITICAL ECONOMY OF POLICY TRANSITION 120 (Oxford University Press 2014).
[14]Charles F. Sabel and David G.Victor, *Governing Global Problems Under Uncertainty: Making Bottom-up Climate Policy Work*, 144 Climate Change, 15, 18 (2017).
[15]*Id.*
[16]Cost-benefit analysis as a regulatory tool has different meanings ranging from the normative use of economics to criterion of wealth maximization when evaluating a particular policy: RICHARD A. POSNER, ECONOMICS ANALYSIS OF LAW402-403 (2007).
[17]RICHARD R. REVESZ, AND MICHAEL LIVERMORE, RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH (2008).
[18]Posner, *supra* note 16, at 402-403.

Focusing on assessing the benefits and costs of the policy choice of withdrawing, this research clarifies how President's Trump choice abruptly departs from the previous administration with regard to reasoned regulatory action. It also illustrates how the withdrawal is unlikely to produce winners in the medium and long runs. U.S. enterprises, consumers and citizens, generally, will have to coop with a polluted environment by coal industries longer than needed, and without getting benefits for themselves. This note briefly contrasts the United States position with the paradigmatic Indian case, as India pledged to significantly reduce its emissions in accordance with the targets of its 2016 ratification of the Paris Accord.[19] The comparison is meaningful, because India is the fourth country in absolute number of emissions, with the United States being the second.[20]

This note is organized as follows: Part I examines a few considerations on why the United States' withdrawal is not maximizing the overall wellbeing of its population, focusing on the cost considerations associated with it. Part II contends that moral considerations should be also factor in this analysis. It also addresses two specific climate change principles which are based on moral concepts: the precautionary principle, and intra-and-inter-generational equity. This note concludes that the United States' withdrawal of the Paris Accord is costly on traditional considerations and when moral considerations are factored in. It also contrasts the United States example with India, a country which moved from reluctant signatory to active member of the Accord.[21]

[19]Kumar Sambhav Shrivastava, India Ratifies Paris Climate Treaty, Hindustan Times (Oct 3, 2016), and available at: htttps://www.hindustantimes.com/india-news/what-signing-the-paris-climate-change-treaty-means-for-india/story-RsDH1IAohQNEqRxb426YbM.html.

[20]*Id.*

[21]For an overview of India's journey from reluctant signatory of the Paris Agreement to its embracement: Ben Westscott, Reluctant Signatory India Takes Moral High-Ground on Paris Climate Deal: CNN (Jun. 2,2017), and available at: https://www.cnn.com/2017/06/02/asia/india-paris-agreement-trump/index.html.

II. SOME CONSIDERATIONS ON THE COSTS ASSOCIATED WITH THE UNITED STATES' WITHDRAWAL FROM THE PARIS AGREEMENT

This article is grounded on the general law economic assumption – and particular cost-benefit analysis' tenet – that regulation should aim at achieving the overall well-being rather than economical efficiency.[22]Importantly, cost-benefit analysis, as a technique, is not mandatory to all administration policies, because it carries its own costs.[23] Regarding international treaties, cost-benefit analysis method is often deemed as not mandatory, due to the explicit exception for foreign affairs.[24] It is noteworthy that the goal of this note is not to discuss the existence of the Paris Agreement itself, but to assess the extent that the current administration made a reasoned decision.[25]

Unregulated competitive markets can generate excessive amounts of air and water pollution, wastes, hazardous materials and other forms of environmental degradation.[26] These market failures tend to be significantly more serious than those addressed by economic regulation, justifying strong regulatory measures.[27]

From a regulatory perspective, administrative action needs to be reasoned.The consideration of costs being informative of the decision, however, is a nuanced claim that has been argued

[22]MATTHEW D. ADLER & ERIC A. POSNER, NEW FOUNDATIONS OF COST-BENEFIT ANALYSIS (2006), at 25.
[23]At the federal level, cost-benefit analysis, as a technique, is traditionally required in all polices that are classified, for instance, as significant regulatory action according to section 3, f, of the Executive Order 12866, of September 30, 1993, Federal Register Vol. 58, N. 190. This provision defines significant regulatory action as one that has an annual effect on the economy of $100 million or more. This provision was supplemented by Section 1(b) of the Executive Order 13563: *The White House Press Release on the Executive Order 13563: Improving regulation and Regulatory Review* (January 18, 2011), available at: https://obamawhitehouse.archives.gov/the-press-office/2011/01/18/executive-order-13563-improving-regulation-and-regulatory-review.
[24]§4, a , of the Executive Order 13771: *Presidential Executive Order on Reducing Regulation and Controlling Regulatory Costs* (January 30, 2017), available at: https://www.whitehouse.gov/presidential-actions/presidential-executive-order-reducing-regulation-controlling-regulatory-costs/.
[25]The White House, Office of the Press Secretary, Statement by the President on the Paris Climate Agreement (Dec. 12, 2015), *supra* note 5.
[26]Richard Stewart, Economic Incentives for Environmental Protection: Opportunities and Obstacles, *in* Environmental Law, the Economy and Sustainable Development, ed. Richard Revesz, Philippe Sands and Richard Stewart, Cambridge (2001), at 172.
[27]*Id.*

theoretically and in context outside the international arena.[28] In this line of reasoning, deregulation, namely, the choice of removing regulations which are in place in a particular market needs to be reasoned. This reasoning does not need to be exhaustive, but it has to inform the administrative action, generally. Stating it differently, where regulatory norms exist, the administration is required to justify the need for extinguishing those previous rules. The rationale is that those same rules, which the new admiration is aiming to abolish, were deemed necessary by the previous administration.[29]

In a decision involving environmental and administrative law, *Michigan v. EPA,* the United States Supreme Court determined that cost consideration is required not only by the statutory scheme at bar, but by principles of administrative law.[30]After *Michigan,* administrative regulatory action is only authorized if costs are considered, and remarkably: "no regulation is appropriate if it does significantly more harm than good."[31]Extrapolating this quote for presidential action, this note argues that the assessment of advantages and disadvantages of a particular deregulation (or regulation) is necessary, despite being in the international field.

On a related note,[32] cost is a relational concept, namely, it is not abstractly defined. Hence, the administration needs to determine whose interest are made a cost to whom in reasoned decision-making.[33]

In light of the above, this note looked at the actual costs of the withdrawal from the Paris Agreement. It turns out, however, that the economical impact of President Trump's withdrawal on the economy, on the environment and on the U.S. society, more generally, is difficult to

[28]Daniel Hamel, Jonathan Masur and Eric Posner, How Antonin Scalia's Ghost Could Block Donald Trump's Wall, *The New York Times* (Jan. 25, 2017).
[29]*Id.*
[30]Michigan v. EPA, 135 S. Ct. 2699 (2015), at 2707-2708.
[31]Justice Scalia, writing for the majority in *Michigan v. EPA, supra* note 18, at 2707.
[32]Arguing that the decision of the United States Supreme Court failed to consider cost as a relational concept (thus not clearly distinguishing cost determination and cost quantification,) which ultimately led to unduly extension of judicial review of administrative action: Daniele Bertolini and Carolina Arlota, *Michigan v. EPA: Cost/Rationality Nexus Clarified*, 29 FOURD. ENV. L. REV. 125, 155 (2017).
[33]For the explanation of cost as a relational concept: WARREN J. SAMUELS, STEVEN J. MEDEMA & A. ALLAN SCHMID, THE ECONOMY AS A PROCESS OF VALUATION (1997).

estimate, because of the multitude of factors involved,[34] particularly in light of the non-reasoned approach that the federal administration is leading in many areas. For instance, if a trade war with China continues, emission may be reduced, whereas if the President actually succeeds in making U.S. economy expanding 5%, or 6% emissions will likely increase.[35]

Another factor contributing to the difficulties on assessing President Trump's decision is the fact that several states of the U.S., led by California and New York, are setting their own limits regarding greenhouse gases.[36] In this scenario, the costs of the withdrawal are particularly difficult to estimate. As it happens with climate change, there is no consensus to when and in what amount such costs will precisely occur.[37]

The precise reasons why President Trump decided to withdraw from the Paris Agreement are unclear. He justified his decision based on economic motivation, such as protecting U.S. economy, particularly U.S. jobs. Alternative motivations abound, as his campaign counted with substantial contributions from oil tycoons.[38] This is quite problematic, considering that President Obama clearly judged that the agreement benefitted the United States, "with more jobs and economic growth driven by low-carbon investment."[39] His understanding was also in tuned with the European Union policy regarding climate change. After all, Europe is concerned with this

[34]Following President Trump's withdrawal of the Paris Agreement, some German interest groups on automobiles expressed concerns about the competitiveness of their product in relation to those produced in the United States. *See:* Edward Taylor, *German Carmakers Fear Losing Competitive Edge After U.S. Paris Exit*, Reuters (2017), available at: https://www.reuters.com/article/us-usa-climatechange-german-carmakers-idUSKBN18T1Q0.

[35]Kate Larsen *et al.*, *Taking Stock 2017: Trump's Regulatory Rollback Begin*, The Rhodium Group (March 27, 2017): https://rhg.com/research/trumps-regulatory-rollback-begins/.

[36]Thirty four U.S. states have committed, so far, to reduce global warming impact despite President Trump's withdrawal. See: Chelsea Harvey, *Trump's Domestic War on Climate Action Has Propelled States into Battle,* Project Earth (Apr. 07, 2017), and available at: https://projectearth.us/trumps-domestic-war-on-climate-action-has-propelled-sta-17964231238.

[37]ERIC POSNER AND ALAN O. SYKES, ECONOMIC FOUNDATIONS OF INTERNATIONAL LAW 230 (2013).

[38]Linking President Trump, the Vice-President Mike Pence and the chief of the Environmental Protection Agency – EPA, to oil tycoons Koch brothers: Jane Mayer, *In the Withdrawal from the Paris Climate Agreement, the Koch Brothers' Campaign becomes Overt,* The New Yorker (Jun. 05, 2017).

[39]The White House, Office of the Press Secretary, Statement by the President on the Paris Climate Agreement (Dec. 12, 2015), *supra* note 5.

topic as well as with technology, because it understands that to remain competitive, it needs to be in the forefront of science and renewable energy.[40]

President Trump mentioned, in his decision-announcement speech, that the United States "will withdraw from the Paris Climate Accord but begins negotiations to reenter either the Paris Accord or a really entirely new transaction on terms that are fair to the United States, its business, its workers, its people, its tax payers."[41] The President further stated that the agreement "disadvantages the United States to the exclusive benefit of other countries," while emphasizing that U.S. taxpayers would have to absorb the costs of lower wages, lost jobs, closed factories and a diminished economy.[42] Importantly, the data cited by President Trump belongs to a discredited study.[43]

Economists were fast in rebut the arguments exposed by President Trump in his announcement of the withdrawal. Those experts contend that rescinding the Paris Agreement will actually aggravate the problem, because jobs which might be preserved by the President's decision, such as those in coal and oil and gas industries, will not be created in other renewable-energy industries.[44] Increasing the costs of the new presidential policy is the fact that jobs under clean energy industries will also attract more investment, in a virtuous circle. Should the U.S. remain investing in traditional non-clean energy, the country will also have to cope with the consequences of climate change itself.

[40]Miranda Schreurs, *The European Union and the Paris Climate Agreement: Moving Forward without the United States*, 15 Chinese Journal of Population Resources and Environment, 192 (2017).
[41]Donald Trump, Statement by President Trump on the Paris Climate Accord (Jun. 01st, 2017), available at: https://www.whitehouse.gov/briefings-statements/statement-president-trump-paris-climate-accord/
Importantly, European leaders denied that there will be such renegotiation. On this point, *supra* note 12.
[42]*Id.*
[43]President Trump referred to the study made by NERA Economic Consulting. Among the main flaws of the study is the fact that only the costs of compliance with the Paris Accord were factored in; no benefits were considered. See: Jon Greenberg, *Fact-checking Donald Trump's statement withdrawing from the Paris climate agreement*, Politifact (Jun. 1, 2017), available at: http:///truth-o-meter/article/2017/jun/01/fact-checking-donald-trumps-statement-withdrawing-/
[44]Rolf Färe, Shawna Grosskopf, Carl A. Pasurka, and Ronald J. Shadbegian."Environmental Regulatory Rigidity and Employment in the Electric Power Sector." In *Does Regulation Kill Jobs?*, University of Pennsylvania Press (Coglianese Cary, Finkel Adam M., and Carrigan Christophereds), 89-108, (2013).

Importantly, it has been argued that the Paris Agreement does not cost net jobs, because coal jobs are in sharply decline while renewable energy is the principal job creator in the energy field.[45] Clean energy enabled the Obama administration to lower greenhouse gas emissions to 1994 levels, while managing to create 11.3 million jobs.[46]

It is noteworthy that the Paris Agreement, which has the support of significant economical actors, such as Exxon Mobil, Walmart, Apple, Shell, General Electric, aims at curbing the effects of global warming thus reducing uncertainty.[47] Any uncertainty, of course, makes business decisions more complex. In an open letter to President Trump, more than thirty U.S. CEOs urged him to remain in the Paris Agreement.[48] Modernization, competitiveness, predictability were among the core justifications alluded in the letter.[49] In this context, a withdrawal may signal that United States companies have lost government support and regulatory certainty.[50]

In its official communication, the U.S. State Department stated that the country's withdrawal of the Paris Agreement, and emphasized that the United States will remain working to reduce its emissions.[51] The text sounded contradictory, because it implies that the Paris Agreement was not in the benefit of U.S. workers, companies and taxpayers, generally.[52] The communication stressed that the United States supports a balanced approach to climate policy, and this equilibrium reconciles lowering emissions with economic growth and energy security.[53]Economic growth and

[45]Peter Haas, *Parxit, the United States, and the World*, 15 Chinese Journal of Population, Resources, and the Environment (2017), 186, at 188.
[46]Gina McCarthy, *If Trump Dumps the Paris Accord, China will Rule the Energy Future,* Foreign Policy (May 31, 2017).
[47]Paul Wisman, *Analysts: Leaving Climate Deal likely wouldn't add U.S. jobs,* AP News (Jun. 01, 2017),https://apnews.com/f89a55b6fcd0428eab02a6f41b24776b/Analysts:-Leaving-climate-deal-likely-wouldn't-add-US-jobs?utm_campaign=SocialFlow&utm_source=Twitter&utm_medium=AP_Politics
[48]The B Team, *CEOS of Major U.S. Companies Urge Trump to Stay in Paris: Mr. President we are writing to express our strong support for the U.S. remaining in the Paris Climate Agreement* (May 10, 20017), and available at: http://www.bteam.org/announcements/30-major-ceos-call-on-trump-stay-in-paris/
[49]*Id.*
[50]Luke Kempt , *Better Out than In*, 7 Nature Climate Change, 458 (2017) at 459, where the author explains that the United States had pledged to contribute US$3 billion, albeit having paid US$1billion so far.
[51]U.S. Department of State, *Communication Regarding the Intent to Withdraw from the Paris Agreement*, (August 7, 2017), available at: https://www.state.gov/r/pa/prs/ps/2017/08/273050.htm
[52]*Id.* The communication states the following: "As the President indicated in his June 1 announcement and subsequently, he is open to re-engaging in the Paris Agreement if the United States can identify terms that are more favorable to it, its businesses, its workers, its people, and its taxpayers."
[53]*Id.*

preserving the environment are not necessarily exclusionary goals, as the UNFCC treaty exemplifies.[54]

On a related point, international treaties aiming at curbing the effects of climate change need to include developing nations. The challenge is that government in those countries face increasing pressure to achieve economic prosperity, frequently at the expense of the environment.[55] More recently, the unlikely progress on renewable energy has displaced the once dominant assumption that economic growth and increasing greenhouse gas emissions must be tied.[56] India is a great example in its transition from a reluctant member in the Paris Agreement to a vocal member in checking the compliance of developed countries, in particular, with their Paris' targets.[57]

The prospects for compliance with the Paris Agreement with the U.S. withdrawal remain unsettled. It is perceived as undermining the legitimacy of the agreement and jeopardizing the effectiveness of climate change governance.[58] It may be that countries will decide to join and comply more effectively with the voluntary nature with the agreement. Or countries may decline to be bound to their targets. The India's ratification of the Paris Accord, despite the potential withdrawing of the United States, provides evidence of the first alternative.

In addition, commentators have argued that the U.S. withdrawal means more than relinquishment of its leadership, as it will ultimately enable China to become the leading player in the energy sector.[59] Experts differ about the weight of the United States' exit. Some have even argued that it might have a positive side.[60] The majority contends, however, that leadership is crucial to expand

[54] *Supra* notes 2 and 3.
[55] For a discussion about conflicting policy choices: Andrew Watson Samaan, *Enforcement of International Environmental Treaties: At Analysis*, 5 Fordham Environmental Law Review 261, 272 (2011).
[56] Brian Deese, *Paris isn't Burning: Why the Climate Agreement Will Survive Trump*, Foreign Affairs (Jul. 2017), available at: https://www.foreignaffairs.com/articles/2017-05-22/paris-isnt-burning
[57] Westscott, Reluctant Signatory India Takes Moral High-Ground on Paris Climate Deal, *supra* note 21.
[58] Zhang Hai-Bin *et al.*, *U.S. Withdrawal from the Paris Agreement: Reasons, impacts, and China's response*, 8 Advances in Climate Change Research 220 (2017), at 222.
[59] Gina McCarthy, *If Trump Dumps the Paris Accord, China will Rule the Energy Future,* Foreign Policy (May 31, 2017).
[60] Kempt , *Better Out than In*, *supra* note 50, at 460.

cooperation beyond Paris, because this Agreement was designed to be very flexible and accommodating of new challenges, including the U.S. withdrawal.[61]

The current U.S. policy sends a terrible precedent for the other nations. It may also contribute to discredit general U.S. climate change negotiation, because it is not the first time that the U.S, withdraws from an international agreement.[62] Hence, it may disturb the process of global climate cooperation.[63] An effective mechanism to foster compliance with international treaties is negative publicity.[64] If negative reputation has been used to pressure countries to comply with international instruments, generally, it may also be the case the U.S. will be subject to this negative repercussion.

The United States' decision also contributes to potential anti-U.S. sentiments, due to the potential free-riding of the United States over signatory nations. With the withdrawal, the United States gain more emission space and reduces mitigation costs while "squeezing other countries emission space and raising their mitigation costs."[65] As addressed earlier, the United States, under President Trump, aims at free-riding. This aim, of course, has significant consequences.

On a related note, the United States' rescission will significantly undermine the financial contribution to climate change. The Paris Agreement establishes a new system for the responsibilities of developed and developing countries, but the treaty does not define which countries belong to the former or to the latter.[66] Article 4 of the Paris Agreement determines that developed counties should remain leading the way through absolute emission reduction targets, developing countries should reduce their emissions in accordance with different national

[61]David G.Victor, *Order from Chaos: America exits the Climate Stage*, Brookings Institution (Jun. 01, 2017), at: https://www.brookings.edu/blog/order-from-chaos/2017/06/01/america-exits-the-climate-stage/

[62]In 2001, before the Kyoto Protocol entered into force, the U.S. withdrew, based on a Senate resolution arguing that the principle of differentiated responsibilities was not in the U.S. domestic interest: Delali Benjamin K. Dovie and Shuaib Lwasa, *Correlating negotiation hotspot issues, Paris Climate Agreement and the international climate policy regime*, 77 Environmental Science and Policy 1 (2017), at 2. On that occasion, European governments opted for expanding the Protocol.

[63]Hai-Bin *et al.*, *supra* note 58, at 223.

[64]Andrew Watson Samaan, *Enforcement of International Environmental Treaties: At Analysis*, 5 Fordham Environmental Law Review (2011), 261, at 274.

[65]Hai-Bin *et al.*, *supra* note 58, at 222.

[66]Izzet Ari and Ramazan Sari, *Differentiation of Developed and Developing Countries for the Paris Agreement,* 18 Energy Strategy Reviews 175 (2017), at 175.

circumstances.[67] Because of the collective action nature of climate change itself, as addressed in the introduction, all counties – not only the United States – will be affected by its withdrawal.

Under the principle of common but differentiated responsibility, developed countries provide climate financing to less developed countries.[68]In his speech, President Trump stressed that the United States would also cease any contribution for the Green Climate Fund.[69] Importantly, the United States contribution is critical for the Accord, as many developing countries have made their national determined contribution and conditional targets upon securing public funding from developed countries.[70]The uncertainty involving specific scientific effects of climate change abound. Nevertheless, there is a high likelihood that developing nations will suffer more climate change inflicted harms than those of the developed world.[71] Developed countries not only have more resources, they are also located in the north hemisphere, where temperatures are temperate.[72]

The scenario above is also potentially dire if one were to consider that President Trump's decision may cost the world a window of opportunity when it comes to climate change mitigation especially with research showing that the ten years after the agreement were crucial for achieving the targets.[73]

The President stressed that China and India would be allowed to build additional coal plants while the U.S. could not increase its emissions.[74] This is not technically accurate. According to the Paris Agreement, all countries are obligated to establish a target and to report and assess their progress towards such target within two years after signing; and later every five years. President

[67]According to article 4, item 4, of the United Nations Framework Convention on Climate Change: conference of the Parties (Paris, December 12, 2015), available on line at: https://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf
[68]Hai-Bin *et al.*, *supra* note 58, at 222.
[69]Donald Trump, Statement by President Trump on the Paris Climate Accord (Jun. 01st, 2017), available at: https://www.whitehouse.gov/briefings-statements/statement-president-trump-paris-climate-accord/
[70]Kempt , *Better Out than in, supra* note 50, at 458.
[71]ERIC POSNER AND ALAN O. SYKES, ECONOMIC FOUNDATIONS OF INTERNATIONAL LAW (2013), at 231-232, where the authors remark that Russia will gain with climate change.
[72]*Id.*
[73]Hai-Bin *et al.*, *supra* note 58, at 223.
[74]Donald Trump, Statement by President Trump on the Paris Climate Accord (Jun. 01st, 2017), available at: ttps://www.whitehouse.gov/briefings-statements/statement-president-trump-paris-climate-accord/

Trump mentioned that the Agreement was an intrusion in the United States' sovereignty and that over time it will only have higher targets, and that United States needed to "unlocking the restrictions on America's abundant energy reserves."[75]

The Paris Agreement encourages countries to review their targets, under the assumption that countries will become more ambitious over time, despite not imposing sanctions.[76] On that note, countries now see the benefits of adopting clean energy industries and thus will likely increase their targets in order to profit from sound clean energy policies.[77] India, itself, is a paradigmatic example.[78]This, however, will not be the United States experience should the withdrawing remains the final decision.

A relevant point regarding countries' review of their targets refers to external monitoring. Countries review their own targets (and overall progress) and those of other members, with global and national civil society as well as public opinion scrutinizing them.[79] Despite emissions by country being quite different, "the inclusivity of the agreement motivates each country to scrutinize the performance of others. When participation rates in social dilemmas are very high or very low, both stigma and honor are maximized for deviant behavior."[80]

Another consideration referring to reputation is the damage caused to United States leadership. The withdrawal from the Paris Accord could turn the United States into a climate pariah, providing an unprecedented opportunity to China or the European Union to boost their international reputations and soft power.[81]

The United States withdrawal reasoning also departs from the understanding that international treaties aiming at curbing the effects of climate change need to include developing nations. And,

[75]Donald Trump, Statement by President Trump on the Paris Climate Accord (Jun. 01st, 2017), available at: https://www.whitehouse.gov/briefings-statements/statement-president-trump-paris-climate-accord/
[76]Hai-Bin *et al.*, *supra* note 58, at 223.
[77]*Id.*
[78]Annie Gowen and Simon Denyer, As U.S. Backs Away from Climate Pledges, India and China Step Up, Washington Post (Jun.1, 2017).
[79]Jennifer Jacquet and Dale Jamieson, Soft but Significant Power in the Paris Agreement, 6 Nature Climate Change, 643 (2016) at 644.
[80]*Id.,* at 645.
[81]Kempt , *supra* note 50, at 460.

in order to do so, they may have different targets for developed and developing countries. The challenge is that government in developing countries face increasing pressure to achieve economic prosperity, frequently at the expense of the environment.[82] In this sense, the India's ratification of the Paris Agreement shows that the country is not perpetuating this stereotype. Importantly, it shows that the country is attentive to the benefits of renewable energy for their economy. After all, the unlikely progress on renewable energy has displaced the once dominant assumption that economic growth and increasing greenhouse gas emissions must be proportional.[83]

Considering all the factors above, this note argues that the United States withdrawing from the Paris Agreement on Climate Change has more disadvantages then advantages for the United States in the medium and long runs, to the extent that limited benefits that might be achieved immediately will be for the coal-industry. Even if it is the case, as examined earlier, it will be for a short period of time. Because a corollary of the economic analysis of law is the comparison with additional policy choices, including not regulating or not modifying the status quo,[84] President Trump's decision does not promote well-being of U.S. citizens. Moreover, it reduces the country's influence in the international arena, which take several years to recover, and may itself prove detrimental to immediate trade considerations, for instance.

III. MORAL DIMENSIONS WHICH SHALL BE FACTORED IN THE ANALYSIS

This section resorts to the theoretical framework of cost-benefit analysis focusing on its moral dimension to assess the impact of the United States' withdrawal. The previous sections of this note demonstrated that traditional cost-benefit analysis validly concludes that the withdrawal did not maximize overall well-being of Americans nor of global citizens. This section contends that even if it were not the case, i.e., even when economic factors do not lead to a clear answer, the moral

[82]For a discussion about conflicting policy choices: Andrew Watson Samaan, *Enforcement of International Environmental Treaties: At Analysis*, 5 Fordham Environmental Law Review 261, 272 (2011).
[83]Deese, *supra* note 56.
[84]DAVID L. WEIMER AND AIDAN R. VINING, POLICY ANALYSIS: CONCEPTS AND PRACTICE 404 (2017).

aspect of a given policy shall also be factored. Hence, this research is aligned with the modern trend which argues that cost-benefit analysis shall not be blind-folded to moral considerations.[85]

In this context, moral considerations should be a part of cost-benefit analysis and may justify the enactment of a particular policy when the benefits do not outweigh the costs, because there are non-monetized factors involved.[86] There may also be non-quantifiable features in a particular time.[87] It has been argued that moral considerations may justify the enactment of environmental, safety or health regulations in cases where the immediate benefits measured under cost-benefit analysis do not outweigh the costs.[88] As Professor Steven Kelman emphasizes:

"Precisely because we fail, for whatever reasons, to give life-saving the value in everyday personal decisions that we in some general terms believe we should give it, we may wish our social decisions to provide us the occasion to display the reverence for life that we espouse but do not always show. By this view, people do not have fixed unambiguous "preferences" to which they give expression through private activities and which therefore should be given expression in public decisions. Rather, they may have what they themselves regard as "higher" and "lower" preferences. The latter may come to the fore in private decisions, but people may want the former to come to the fore in public decisions. They may sometimes display racial prejudice, but support antidiscrimination laws. They may buy a certain product after seeing a seductive ad, but be skeptical enough of advertising to want the government to keep a close eye on it. In such cases, the use of private behavior to impute the values that should be entered for public decisions, as is done by using willingness to pay in private transactions, commits grievous offense against a view of the behavior of the citizen that is deeply engrained in our democratic tradition. It is a view that

[85]References are made to:Steven Kelman, *Cost-Benefit Analysis: An Ethical Critique*, 5 REGULATION 33, 40 (1981); Martha Nussbaum, *The Costs of Tragedy: Some Moral Limits of Cost-Benefit Analysis*, 29 J. LEGAL STUD. 1005, 1035 (2000).
[86]Kelman, *supra* note 85, at 33.
[87]Emphasizing that surveys of self-reported well-being are relevant and produce helpful information, despite not being possible to "map" the regulatory impact in well-being scales: Cass R. Sunstein, *Cost-Benefit Analysis, Who's Your Daddy?*, 7 J. BENEFIT COST. ANAL. 107, 107-120 (2016).
[88]Kelman, *supra* note 85, at 33.

denudes politics of any independent role in society, reducing it to a mechanistic, mimicking recalculation based on private behavior."[89]

In light of the above, political action – and administrative action, in particular – shall not be conducted as it were private behavior. The stakes are higher. So must be the considerations reflecting the values of our society.

A close argument in support of moral considerations to cost-benefit analysis on the membership in the Climate Change Agreement is the principle of common but differentiated responsibilities and respective capabilities (CBDRRC).[90] According to this principle, which still binds the United States because it remains a party in the UNFCCC,[91] responsibility for current and historical contributions need to be factored. In this context, the accusations by President Trump are not sound, because developing states have contributed less to the current concentration of greenhouse gases and overall threshold on carbon saturation.

Importantly, cost-benefit analysis can "actually help us when we are in doubt about where to set the threshold of citizen's basic entitlements. . . . More generally all rights have costs, so thinking about where to set the threshold level of any right is sensibly done with these costs in mind." [92]

In such context, it is noteworthy to discuss two climate change principles which carry moral considerations. Those principles derive from the nature of the protection, namely, the common good and the no limitation of boundaries if damages are incurred. This note address, thus, the following climate change principles which have a moral orientation, are difficult to be monetized and pertain to International Law: the precautionary principle and the intra-and-inter-generational equity.

[89]Kelman, *supra* note 85, at 37.http://unfccc.int/tools_xml/country_US.html
[90]Article 3 (1) of the UNFCCC determines that: "The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities."
[91]Confirming the U.S. membership in the UNFCC Treaty: http://unfccc.int/tools_xml/country_US.html
[92]Nussbaum, *supra* note 85.

The precautionary principle is stated at Article 3 (3), of the United Nations Framework Convention on Climate Change (UNFCCC), and determines that parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change, mitigate its adverse effects, while emphasizing that lack of scientific certainty should not be used to postpone such measures where threats of serious or irreversible damage exist.[93] The same provision states that policies and measures to deal with climate change should be cost-effective in order to ensure global benefits at the lowest possible costs.[94]

In this scenario, and to extent that the United States remains a party to the UNFCCC, the United States is obligated, under international law, to reduce emissions of greenhouse gases (GHS), whose impacts are notoriously difficult to reverse. This is a controversial claim, because some commentators would argue that precaution needs also cost-effectiveness and is not a binary all or nothing approach, but a spectrum.[95]

This note contends, however, that the precautionary principle would at least oblige the United States to achieve its voluntary quota under the Paris Accord. This the case, because this note interprets the precautionary principle as having another manifestation, namely, the prohibition of setbacks. Countries, on this view, should not be moving backwards in climate change matters. After all, in the case of climate policy, precaution would largely be applicable to limit old technologies, such as fossil fuels.[96] Moreover, effective policy-making is based on the assessment of complete policy impacts, including ancillary costs as well as ancillary benefits.[97]More significantly, perhaps, is that we may be beyond precaution now, as "we probably blew past our

[93]Article 3 (3) of the United Nations Framework Convention on Climate Change (UNFCCC): https://unfccc.int/resource/docs/convkp/conveng.pdf
[94]*Id.*
[95]Jonathan B. Weiner, Precaution and Climate Change, in The Oxford Handbook of International Climate Change Law, ed. Cinnamon P. Carlarne, Kevin R. Gray, Richard G. Tarasofsky (2016), at 166-168.
[96]*Id.,* at 170.
[97]*Id.,* at 171. For an in-depth discussion about ancillary harms and benefits (co-benefits), see: Revesz, and Michael Livermore, Retaking Rationality: How Cost-benefit Analysis can Better Protect the Environment and Our Health, supra.

precautionary opportunity sometime in the 1980's. We are now, and have been for some time, in a post-cautionary world."[98]

The principle of intra-and-inter-generational equity is defined in the first part of article 3 (1) of the UNFCC.[99] This principle defines rights and obligations regarding the use and enjoyment of natural and cultural resources, inherited by the present generation and to be passed on to future generations in no worse condition than received.[100] The legal force of this principle is disputed, but it should be consider among the factors that will inform policy decisions regarding climate change.[101]

International human rights bodies have consistently contended that environmental harm can adversely affect the enjoyment of human rights.[102] The right to life can be threaten by natural events attributed to climate change, namely: floods, storms, droughts, hunger, malnutrition, scarcity of water, proliferation of tropical deceases, such as malaria; the right to housing is also affected, due to forced misplacement, among others.[103] Because climate change is a type of environmental harm, human rights obligations that are applicable "in the context of environmental harm generally should apply to climate change as well."[104] Moreover, the regressive nature of carbon-pricing lead costs to be borne by consumers and, thus, those with lower income who spend proportionally more on non-discretionary goods and services will be more affected.[105]

IV. CONCLUSION

[98]Lisa Heinzerling, *Climate Change, Human Health, and the Post-Cautionary Principle*, 96 Georgetown Law Journal, 455, at 452.
[99]Article 3 (1) of the UNFCCC determines that: "The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities."
[100]Catherine Redgwell, Principles and Emerging Norms in International Law: Intra-and-Inter-generational Equity, *in* The Oxford Handbook of International Climate Change Law, ed. Cinnamon P. Carlarne, Kevin R. Gray, Richard G. Tarasofsky (2016), at 188.
[101]*Id.,* at 195-196.
[102]John H. Knox, Human Rights Principles and Climate Change, *in* The Oxford Handbook of International Climate Change Law, ed. Cinnamon P. Carlarne, Kevin R. Gray, Richard G. Tarasofsky (2016), at 217.
[103]*Id.,* at 219.
[104]*Id.,* at 220.
[105]Trebilcock, *supra* note 13, at 121.

This note considered some of the many relevant factors on why the United States' withdrawal is not maximizing the overall wellbeing of its population, focusing on the cost considerations associated with it. In addition, this research clarified how President's Trump choice abruptly departs from the previous administration with regard to reasoned regulatory action.

Furthermore, this note argued that the moral dimensions should also be part of such analysis, while addressing two specific climate change principles which are based on moral concepts, namely, the precautionary principle, and intra-and-inter-generational equity. This note contained that, once this moral perspective is included, the costs of the United States' withdrawal become even more significant.

The assessment of the benefits and costs of the policy illustrates how the withdrawal is unlikely to produce winners in the medium and long runs. U.S. enterprises, consumers and citizens, generally, will have to coop with a polluted environment by coal industries longer than needed, and without getting benefits for themselves. This note briefly contrasts the United States position with the paradigmatic case of India.

In conclusion, the United States' withdrawal of the Paris Accord is costly on traditional considerations, without benefits on the medium nor the long run. If moral considerations are factored in the analysis, the costs are even higher. The United States' withdrawal sharply contrasts with India, a country which moved from reluctant signatory to active member of the Accord and recent leader on climate change policy. Hence, the United States choice of withdrawing from the Paris Agreement should not have occurred. From this normative approach, the United States not only should have remained in the Accord, it should have continue to be a leading force on reducing carbon emissions and mitigating the impacts of climate change.