(Un)Sustainable Development? Examining Growth Model Selection in Workers' Party and Bolsonaro Presidencies

Abigail English, Adriana Perez, Annemarie Foy, Thanh Nguyen

Publication Date

09-12-2023

(Un)Sustainable Development?

Examining Growth Model Selection in the Workers' Party and Bolsonaro Presidencies

Annemarie Foy, Thanh Nguyen, Abigail English, and Adriana Perez

April 26, 2022

Introduction

As the global community continues to grapple with the urgency of climate change, more attention has been paid to how developing countries address the challenge of sustainable development. These countries, in particular, face a tension between relying on resource-intensive economic growth models versus more sustainable development models. By resource-intensive growth models, we refer to an economy based on the extraction of natural resources, namely oil and forestry, with little to no regard for the environmental impacts. Conversely, a sustainable development model is one that seeks to meet "the needs of the present without compromising the ability of future generations to meet their own needs"[1] and emphasizes the interconnectedness of economic growth and environmental concerns.

Developing countries face a tension in pursuing different growth models due to the economic needs of their population and to international pressures to enact environmentally friendly policies, especially if said countries are rich in natural resources that could potentially be exploited to fulfill its population's needs. Acosta explains this through the 'paradox of plenty:' "The countries that are rich in natural resources, and whose economy is based primarily on extracting and exporting those resources, find it more difficult to develop."[2] This paper will focus on the case of Brazil to understand under what conditions developing countries are more likely to choose one growth model over another. Understanding the root causes that lead a country to pursue a certain growth model is important for thinking about how best to coordinate international, collaborative responses to climate change that respond to both environmental and social needs in the age of sustainable development.

---

[1] United Nations World Commission on Environment and Development, "Report of the World Commission on Environment and Development: Our Common Future," (1987). sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf.

[2] Alberto Acosta, "Extractivism and neoextractivism: two sides of the same curse" in *Beyond Development: Alternative Visions from Latin America*, edited by Dunia Mokrani and Miriam Lang (Quito: Fundación Rosa Luxemburg, 2013), 62.

This paper is organized as follows. In the first section, we set out to explore this question by exploring scholarly literature on the possible causes of growth model choices. We identify four possible explanations: government ideology, indigenous activism, globalization pressures, and economic profile. In the second section, we introduce our argument which emphasizes that government ideology drives the choice of growth model primarily through the mechanism of bureaucratic appointments. In the third section, we present our research design and describe how data was collected. In the fourth section, we present our case study evidence and discuss its implications for our research question. In the final section, we provide concluding thoughts on the data and how it supports our argument.

Literature review

Drawing on previous literature, we identify four plausible explanations for how countries choose growth models: indigenous activism, globalization pressures, economic profile, and government ideology. The first explanation emphasizes the role of indigenous actors, which are historically strong political constituencies in Latin America, in government policy. The second explanation concerns globalization pressures and developing countries' reliance on foreign direct investments (FDI) as an influencing factor in the growth model pursued. The third explanation is also concerned with a developing country's economic profile, looking at the ways in which economic growth rates affect environmental policy. The final explanation present in the literature is government ideology, broadly understood as shaped by government coalitions and constituencies, the model of extractivism, and the professionalization of activism or the centralization of environmental governance.

The first possible explanation for how governments choose growth models is the role of *indigenous activists.* Depending on strategies and mobilization, indigenous communities can be influential political constituencies, whose tensions and clashes with a nation state's policy can push developing governments to favor sustainable development models over resource-intensive economic growth models, which can encroach on indigenous claims and rights. Indigenous actors have a large stake in policy regarding climate action due to their demands surrounding land rights, control over natural resources, autonomy, and cultural recognition. These concerns have forced many groups to develop different forms of resistance and adaptation. Previous literature suggests the success of indigenous activist groups in policy relies more on disruptive action rather than formal decision-making mechanisms. This occurs due to the historic lack of access to these mechanisms, especially in regards to natural resource development decision-making.[3] During the 1990s, for example, indigenous actors in Bolivia, Ecuador, and Peru became strong political actors who successfully curtailed neoliberal reforms through the use of marches, protests, and sit-ins.

However, more recent developments in technology and a continued rise in globalization have opened new political opportunities for indigenous actors. First, Doolittle (2010) notes the roles and strategies that the politics of indigeneity play on the international level. At climate change negotiations, where indigenous environmental activists are increasingly voicing their concerns, indigenous groups form international coalitions and alliances through rhetorical strategies.[4] More specifically, "values, identities and knowledge systems are simplified in order to present a unified 'indigenous worldview.'"[5] This unity narrative underscores how indigenous

[3] Pascal Lupien and Faculté Saint-Jean, "Indigenous Politics and Resistance in Latin America: Continuity and Change," *Oxford Research Encyclopedia of Politics,* (2020): 3, doi.org/10.1093/acrefore/9780190228637.013.1770.
[4] Amity Doolittle, "The Politics of Indigeneity: Indigenous Strategies for Inclusion in Climate Change Negotiations," *Journal of Conservation and Society* 8, no. 4 (2010): 286-291.
[5] Ibid, 287.

knowledge can shift in relation to power dynamics and in multiple ways to not only achieve legitimacy in international negotiations but also allow for outside coalitions to hear and identify with their struggles nationally. Gillooly notes that this particular "transcendence of identity politics" partly explains successful transitions of indigenous social movements to a political party, such as in the case of Guatemala.[6] Beyond rhetorical strategies, indigenous groups also utilize legal action and electoral participation.

An important intervention that indigenous communities make, and one that is relevant for this paper, is shaping sustainable development models. Increasing local, national, and global interaction with indigenous movements has allowed for the emergence of Mayan, Garifuna, Andean, and other indigenous theories of development, which continue to be shaped by cooperation with, and opposition to development projects from international corporations or national governments. Macneill (2020) thus defines indigenous sustainable development as "an iteration of existing ideas from varying sources as they interact with the historical and current every-day experience of indigenous communities."[7] One key characteristic of an indigenous sustainable development includes 'naturacultura,' or the belief that people cannot be conceived of separately from the land and that development should be culturally defined.[8] In other words, development goes hand in hand with the harmony between the human environment and the natural environment. The centrality of naturacultura in indigenous sustainable development models differs from a hegemonic neoliberal one because, unlike indigenous sustainable development, even neoliberal models do not seek to blend physical resources with social or cultural resources.[9] Determining whether indigenous actors play a role in government decisions

[6] Shauna Gillooly, "Indigenous social movements and political institutionalization: a comparative case study," *Politics, Groups, and Identities* 8, no. 5 (2020): 1017.
[7] Timothy Macneill, "Indigenous Sustainable Development" in *Indigenous Cultures and Sustainable Development in Latin America* (Oshawa, ON, Canada: Palgrave Macmillan, 2020), 239.
[8] Ibid.
[9] Ibid, 242-245.

regarding development requires a closer examination of how indigenous ideas influence or do not influence development implementation and policy.

The second possible explanation for how governments choose growth models is the role of *globalization pressures.* Globalization is the process by which interactions between people, corporations, and governments become increasingly international, enhancing the influence of markets. Globalization pressures may make developing countries likelier to opt for a resource-intensive economic growth model. The potential economic benefits from opting for resource-intensive growth models is attractive to developing countries and potential investors. Developing countries' reliance on FDI leads them to liberalize trade policies because doing so increases their attractiveness to foreign investors.[10] This could be explained by two mechanisms. First, investors tend to prefer investing in countries where liberal economic policies are predominant and where governments' intervention in the market is limited.[11] In fact, developing nations see higher increases in FDI from liberalization relative to developed countries because they typically have the most restrictive policies to begin with.[12] Signing onto International Trade Agreements indicate a country's commitment to trade liberalization, suggesting to investors that a receptive climate for investment exists.[13] Second, concerns over competitiveness can lead developing countries to incentivize foreign capital by lowering environmental standards, thus reducing production costs relative to others. This has the potential to create a 'race to the bottom' in environmental standards that concentrates resource-intensive industries where the standards

[10] Séna K. Gnangnon. "Multilateral Trade Liberalisation and Foreign Direct Investment Flows," *Institute of Economic Affairs* 37, no. 1 (2017): 79.
[11] Tim Büthe and Helen V. Milner, "The Politics of Foreign Direct Investment into Developing Countries: Increasing FDI through International Trade Agreements," *Americana Journal of Political Science* 52, no. 4 (2018): 744.
[12] Gnangnon 2017, *op. cit*, 1.
[13] Büthe and Milner 2018, *op cit*, 745.

are lower.[14] Both lower environmental standards and trade liberalization serve to attract FDI into developing countries.

In developing countries, economic growth may depend on attracting FDI. Unlike post-materialist societies that can potentially prioritize environmental standards over economic growth, developing nations make policy decisions based on what will provide them with the highest growth rates, rather than what will lead to more sustainable outcomes. Globalization pressures could be a factor in their decision to adopt resource-intensive growth models because liberalization of trade and lowering environmental standards, which exploit unsustainable industries, allow for major economic growth. Although there is significant evidence for growth incentives stemming from globalization, there is minimal research on the effect that a developing nations' potential for green production has on FDI and vice versa. By assuming that the only reason for investment in developing countries is the potential of their resource-intensive industries, there is a gap in research in regards to the effect of potential markets for renewables on developing countries' growth model decisions. This is particularly relevant as production methods become greener.

A third alternative explanation is that developing countries choose their economic growth models based on their *economic profile*, including their dependence on natural resources, the availability of environmental and labor resources, and the rate of economic growth.

Developing nations, which are less wealthy and have fewer technological and institutional resources, rely more directly on environmental resources.[15] However, this does not necessarily mean that they favor resource-intensive economic growth models over sustainable

[14] Theordore Panayotou, "Globalization and Environment," *Center for International Development. Working Paper Series* 2000.53 (Cambridge: Harvard University, 2000), 4.
[15] Graeme S. Cumming and Stephan von Cramon-Taubade, "Linking economic growth pathways and environmental sustainability by understanding development as alternate social–ecological regimes," *Proceedings of the National Academy of Sciences of the United States of America* 115, no. 38 (2018): 9536.

development models. Cumming and von Cramon-Taubade (2018) posit the existence of "green-loop" and "red-loop" feedbacks, the former meaning economies that rely more directly on local natural resources and the latter meaning economies in which non-ecosystem services are the most dominant but therefore have to import and consume more natural resources.[16]

The physical or geographical features that shape the economy may contribute to a developing nation's choice of economic growth model. For example, countries that have a higher availability of bioproductive land and a higher availability of skilled labor have a higher ability to develop a successful bio-economy that can improve sustainability without increasing pressures on ecosystems.[17] As far as countries without bioproductive land or without an adaptable labor force, developing nations that have a larger high-tech sector have more diversified bio-economy strategies but in doing so have reached unsustainably high levels of resource consumption.[18]

In addition, the availability and type of natural resources will shape a nation's economic growth model and its level of sustainability.[19] Developing countries that have fewer natural resources may be forced to choose economic growth models that export environmental impacts; on the other hand, developing nations with more natural resources may be unable to cope with population growth and therefore struggle to eliminate poverty as per capita income declines.[20]

The rate at which a developing nation's economy is growing may also impact its environmental policy choices. At first, economic growth may result in more pollution as economic activity increases, but eventually, as growth continues, pollution may decline as a nation relies less on manufacturing and is able to develop or use greener technologies.[21]

---

[16] Ibid, 9533.
[17] Lisa Biber-Freudenberger, Amit Kumar Basukala, Martin Bruckner, and Jan Börner, "Sustainability Performance of National Bio-Economies," *Sustainability* 10, no. 8 (2018): 16.
[18] Ibid.
[19] Cumming and von Cramon-Taubade 2018, *op. cit.*, 9533.
[20] Ibid, 9536.
[21] Gabriele Spilker, Vally Koubi, and Thomas Bernauer, "International Political Economy and the Environment," *Oxford Research Encyclopedia of Politics* (2017): 8.

However, economic growth will not necessarily result in environmental sustainability, as countries whose economy expands by relying less directly on natural resources are actually just exporting their environmental impacts to nations from whom they import natural products.[22]

Our final possible explanation for how governments choose growth models is *government ideology*. Right-wing governments would likely favor resource-intensive economic growth models whereas left-wing governments would likely favor sustainable development models. Ideology may drive the choice of growth model based on policy preferences: right-wing governments may hold market-oriented and neoliberal policy preferences,[23] including privatization and extractivism.[24] Conversely, the policy preferences of the New Latin American Left may favor social justice and voter participation leading to commitment to a more equitable growth model.[25] Many of these leftist parties, however, are characterized by Levitsky and Roberts as "little more than a rejection of neoliberalism."[26] There are several mechanisms through which government ideology may impact growth model choice: type of constituencies, type of extractivism, and the professionalization of activism versus the centralization of environmental governance.

Ideology may drive growth model choice based on the makeup of constituencies. New Left government supporters such as indigenous people and peasants have expressed concerns for environmental justice, conservation, and land rights.[27] Left-leaning heads of state thus tend to

---

[22] Cumming and von Cramon-Taubade 2018, *op. cit.*, 9533.
[23] Glen Biglaiser and Ronald J. McGauvran, "Political Mandate and Clarity of Responsibility: Economic Policies under Rightist Governments in Latin America," *Latin American Research Review* 53, no. 2 (2018): 252.
[24] Roberto Goulart Menezes and Ricardo Barbosa Jr., "Environmental governance under Bolsonaro: dismantling institutions, curtailing participation, delegitimising opposition," *Journal of Comparative Politics* 15, (2021): 231, 236.
[25] Levitsky, Steven and Kenneth M. Roberts, *The Resurgence of the Latin American Left* (Baltimore: Johns Hopkins University Press, 2011), 3.
[26] Ibid, 4.
[27] Benedicte Bull and Mariel Cristina Aguilar-Stoen, *Environmental Politics in Latin America: Elite Dynamics, the Left Tide and Sustainable Development* (Oxfordshire: Routledge, 2015), 2.

have constituencies that prefer pro-environmental policies more than right-leaning constituencies. On the other hand, the constituencies of right-leaning heads of state are more likely to include business interests than that of ideologically left-leaning constituencies. For instance, right-wing presidents that uphold extractivist interests often receive support from the extractivist sector, including the monoculture, ranching, mining, and logging industries.[28] Furthermore, "scholarly literature suggests that rightist presidents favor neoliberalism… because their richer core constituencies benefit from market policies."[29] Accordingly, right-leaning governments are more likely to institute policies that appease business interests, many of which prioritize economic gain over environmentally friendly policy. Because of the potential economic gains offered by resource-intensive growth models and the minimal pressure from their constituencies to prioritize the environment, right-leaning heads of state are more likely to opt for resource-intensive models over sustainable development growth models. Left-leaning constituencies are more likely to prioritize a balance between meeting the needs of the present and meeting the needs of the future than right-leaning constituencies. In the trade-off between environmentalism and economic growth, left-leaning constituencies tend to leave more room for environmentalism relative to right-leaning constituencies.

Ideology may also influence the pursuit of a given growth model due to the extractivism model it aligns best with. Acosta defines extractivism as a "mode of accumulation" and a set of activities that "remove large quantities of natural resources that are not processed (or processed only to a limited degree), especially for export."[30] Total extractivism, thus, implies the unlimited and unrestricted exploitation of natural resources through an intensified kind of extractivism, "defined as a global imperative of the capitalist economy that occurs through the use of violent

[28] Menezes and Barbosa 2021, *op. cit.*, 237.
[29] Biglaiser and McGauvran 2018, *op. cit.,* 251.
[30] Acosta 2013, *op. cit.,* 62.

technologies"[31] and that completely disregards environmental impacts in the process. This type of extractivism would then align with the ideology of right-wing, neoliberal, market-oriented politicians. Furthermore, Acosta explains that, among so-called progressive governments in South America, a new type of extractivism has emerged: neoextractivism. This type of extractivism entails "greater state access to and control of natural resources and the benefits that their extraction produces" that "is thus seen as indispensable for combating poverty and promoting development."[32] In Latin American countries such as Bolivia and Ecuador, where left-wing governments have formally endorsed environmental rights, the exploitation of resources has still increased "in order to provide the financial revenues for welfare."[33]

It is important to note, too, that some left-wing governments in Latin America, in seeking to lift their citizens out of poverty, have still "placed much weight on generating economic growth by way of state interventions" in the environment.[34] Similarly, mandate-holding rightist governments in Latin America have not always adhered to market-oriented policies and some have even favored government intervention in the economy as strict market reforms have grown unpopular in the region.[35] Thus, it is necessary for this paper to delve into the complicated ways in which ideology interacts with the very real needs of a population in a developing country.

A final mechanism by which government ideology affects choice of growth model is the professionalization of activism. When activists are appointed to positions in the bureaucracy, they have a greater influence over the implementation of sustainable growth models and can

[31] Menezes and Barbosa 2021, *op. cit.*, 231.
[32] Acosta 2013, *op. cit.*, 72.
[33] Jean Grugel and Lorenza B. Fontana, "Human Rights and the Pink Tide in Latin America: Which Rights Matter?" *Development and Change* 50, no. 3 (2019): 707-734.
[34] Bull and Aguilar Stoen 2015, *op. cit.*, 8.
[35] Biglaiser and McGauvran, *op. cit.*, 251.

push their own sustainability-oriented agenda from within.[36] We will explain this further in the following section.

Argument

We argue that more ideologically conservative heads of state will choose a resource-intensive growth model over a sustainable development model. Although several mechanisms influence the reach of government ideology, we argue that government ideology is most influential through the professionalization of activism and activists' influence on the bureaucracy. Left-wing presidents are more likely to appoint activists as professional bureaucrats, who in turn have a greater influence over policy as insiders than they would as outside activists. By pivoting from protests to more formal forms of negotiation, via their established offices in government, activists can bring their demands to the decision-making tables more easily.

If more ideologically conservative heads of state are more likely to choose a resource-intensive growth model over a sustainable growth model, we expect these states to exhibit imperfect compliance with obligations set out in international climate change agreements, higher deforestation rates, and soybean and oil exports that comprise a higher proportion of GDP. Because resource-intensive growth models tend to be incompatible with measures taken to fulfill international climate change obligations, these states will tend to not comply. Furthermore, resource-intensive models exhibit greater deforestation in order to take advantage of resources that provide economic growth at the expense of the environment, like soybean agriculture and crude oil extraction.

[36] Angela Alonso and Débora Maciel, "From Protest to Professionalization: Brazilian Environmental Activism After Rio-92," *The Journal of Environment & Development* 19, no. 3 (2010): 313.

Research Design

Having established our argument, we now set out to detail our methodology. We empirically examine the effects of our independent variables—political ideology, indigenous activism, degree of globalization, economic profile—on the government's choice of an economic growth model.

Our outcome variable is growth model choice. Growth models vary in terms of their degree of sustainability. This can be measured in one of two ways. The first is an objective economic measurement, for which we use crude oil exports as a percent of GDP and soybean exports as a percent of GDP as indicators. The second is an ecological measurement, for which we used annual square kilometers of deforestation in the Amazon as an indicator.

For our model, higher crude oil exports indicate a lower degree of sustainability because exploring and drilling for oil disturbs the environment and it is vulnerable to spills and leaks that destroy local ecosystems.[37] As a monoculture crop, soybean production requires "large-scale land degradation" and deforestation, which is inherently resource-intensive.[38]

Our main independent variable is political ideology. This is defined as the coordinated body of beliefs in a government, and can be either left-wing or right-wing. We further measure the mechanisms through which political ideology may impact growth model choice: voter demographics, professionalization or centralization, and model of extractivism.

We also measure three independent variables that allow us to address potential alternative explanations. Indigenous activism refers to the extent to which indigenous groups, as an activist

[37] "Oil and petroleum products explained: Oil and the environment," U.S. Energy Information Administration, July 20, 2021, https://www.eia.gov/energyexplained/oil-and-petroleum-products/oil-and-the-environment.php.
[38] Annelies Boerema, Alain Peeters, Sanne Swolfs, Floor Vandevenne, Sander Jacobs, Jan Staes, and Patrick Meire, "Soybean Trade: Balancing Environmental and Socio-Economic Impacts of an Intercontinental Market," *PLOS One* 11, no. 5 (2016): 1.

coalition, influence government policy and action. Indigenous activism is measured through the presence of indigenous representation in government and the presence of policies involving indigenous actors and/or ideas.

The degree of globalization pressure is measured by FDI net inflows into Brazil. FDI is defined as the extent of cross-border investments made by an investor in one economy intending to establish a lasting interest in another economy. This measure captures the links between economies and is, thus, an indicator of the degree to which a state is integrated into the global economy. We take greater foreign direct investment inflows to mean a greater degree of globalization pressures on that economy.

Economic profile refers to the characteristics of a nation's economy, including its rate of growth, the size of the nation's labor force, and the availability of natural resources. Our measure of a country's economic profile is the annual rate of change of its gross domestic product (GDP) because the literature suggests that an economy's growth influences that nation's environmental policy choices, especially in developing nations.[39] As a country's economy grows, it relies more heavily on resources to begin with and then later can use continuous growth as a justification for more sustainable economic practices.[40] Although the availability of Brazil's labor force and natural resources did not change, indicating some continuity in economic profile between the Workers' Party and Bolsonaro, we do not choose to use GDP growth as a control variable because we see considerable change in the latter years of the Dilma presidency in particular.

We focus our empirical research on the Brazilian context, and exploit the change in government ideology between the Workers' Party Presidencies of Luiz Inácio Lula da Silva (2003-2010) and Dilma Rousseff (2011-2016), and the Presidency of Bolsonaro (2016-present).

---

[39] Spilker et al., *op. cit.* 8.
[40] Ibid.

We do not distinguish between Lula and Dilma's presidencies because, although their administrations sometimes exhibited different environmental policy and outcomes, it is not clear that these differences are significant enough to divide into separate cases.

Brazil is an excellent context to test our theory for several reasons. First, the Workers' Party presidencies and Bolsonaro's presidency were chosen to employ the method of logic of difference. The two cases exhibited different growth model choices measured in either objective or subjective terms. During the Workers' Party presidencies, deforestation slowed even as soybean and crude oil exports increased, while during Bolsonaro's presidency, soybean and crude oil exports continued to increase while deforestation began to increase again. Second, studying presidential terms in Brazil is appropriate due to the hyper-presidentialism present in the country, by which the president's power is very large due to a weak system of checks and balances. Thus, presidential ambitions are likely to strongly drive policy outcomes, though these are highly regulated by the appointed Minister of the Environment.[41] Finally, choosing two presidencies within the same country also allows us to ensure that several factors external to our independent variables are not influencing the country's decision to opt for a resource-intensive growth model over a sustainable development model. By choosing two periods within Brazil, we are able to hold regime type, geographical area, and general level of development, amongst other factors, as control variables to mitigate any vast variation in data.

We use several sources of data. Our data on political ideology of the ruling parties in Brazil is primarily derived from academic papers about Brazil's political economy, including Hochstetler (2017), Alonso and Maciel (2010), Abers (2019), Menezes and Barbosa (2021), Bull and Aguilar-Stoen (2015), and Hunter (2010). We also relied on data from the Climate Action

[41] Kathryn Hochstetler, "Tracking presidents and policies: environmental politics from Lula to Dilma," *Policy Studies* 38, no. 3 (2017): 264.

Tracker, an independent organization that monitors governmental policies on the environment in 39 countries and measures their impact against the requirements of the Paris Agreement.[42]

Our data on the role of indigenous actors in environmental policy in Brazil is also primarily derived from academic papers, including Diamond and Poirier (2020) and Cavalho, Goyes, and Weis (2021). We also drew upon a news article from Reuters, an independent international news agency.

Our data on globalization in Brazil, measured through FDI and our data on Brazil's economic profile, measured through rate of change of GDP, were both derived from the World Bank. The World Bank's data on FDI is based in turn partly on data from the United Nations Conference on Trade and Development and official national sources,[43] and the data on GDP growth is based in part on OECD National Accounts.[44]

Our data on Brazil's crude oil and soybean exports, which is part of the description of the outcome (choice of growth model), is derived from the Observatory of Economic Complexity, a data visualization website for international trade.[45] The OEC is an independent organization, established at the Massachusetts Institute of Technology (MIT), that integrates trade data from a variety of sources and databases.

Our data on deforestation in Brazil, which is the other part of the description of the outcome (choice of growth model), is derived from Brazil's *Instituto Nacional de Pesquisas Espaciais* - INPE (National Institute for Space Research). INPE oversees the PRODES project, which has since 1988 used satellite monitoring to determine the rate of deforestation in the

---

[42] Climate Action Tracker, "The Climate Action Tracker," last updated 2022, https://climateactiontracker.org/about/.
[43] World Bank, "Foreign direct investment, net inflows (BoP, billions of dollars) – Brazil," The World Bank Group, Accessed April 12, 2022, https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD?locations=BR.
[44] World Bank, "GDP growth (annual %) - Brazil," The World Bank Group, Accessed April 14, 2022, https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2020&locations=BR.
[45] The Observatory of Economic Complexity, "Brazil," accessed April 12, 2022, https://oec.world/en/profile/country/bra.

Amazon region.[46] While this is an official government source, the literature indicates that it is considered to be reliable and well-respected by the international scientific community.[47] Perhaps the best indicator of INPE's historical independence is that Bolsonaro fired its director in 2019 and its general coordinator of the Earth Observation Agency (the subdivision that oversees the PRODES project) in 2020 in response to data that indicated that deforestation had risen sharply early in his presidency.[48] Bolsonaro's retaliation against both officials indicates that INPE continues to remain independent, even when its findings are unfavorable to the presidential administration. Scientific organizations in Brazil and abroad—including NASA officials—responded to the firings by reiterating INPE's scientific credibility and leadership in its field.[49]

A potential weakness of our data is the effect of the ongoing COVID-19 pandemic on the global economy. Since the pandemic began just a year into Bolsonaro's presidency, it is difficult to gauge to what extent growth model choice may have been impacted by the global pandemic.

Across the world, the pandemic prompted governments to turn to high-emissions industries in order to stimulate the economy most quickly, and the oil and gas industries were the most active industry in terms of lobbying governments for immediate financial relief.[50] Even

---

[46] "Monitoramento do Desmatamento da Floresta Amazônica Brasileira por Satélite," Coordenação-Geral de Observação da Terra, INPE, last modified November 19, 2021, http://www.obt.inpe.br/OBT/assuntos/programas/amazonia/prodes.

[47] Karla Mendez, "Future of Amazon deforestation data in doubt as research head sacked," *Mongabay*, August 5, 2019, https://news.mongabay.com/2019/08/future-of-amazon-deforestation-data-in-doubt-as-research-head-sacked/; Eli Kintisch, "Improved Monitoring of Rainforests Helps Pierce Haze of Deforestation," *Science Mag* 316 (200), http://www.obt.inpe.br/OBT/assuntos/programas/amazonia/prodes/pdfs/kintish_2007.pdf.

[48] Jenny Gonzalez, "Top Amazon deforestation satellite researcher sacked by Bolsonaro," *Mongabay,* July 14, 2020, https://news.mongabay.com/2020/07/top-amazon-deforestation-satellite-researcher-sacked-by-bolsonaro/.

[49] Herton Escobar, "Brazilian institute head fired after clashing with nation's president over deforestation data," *Science*, American Association for the Advancement of Science, August 4, 2019, https://www.science.org/content/article/brazilian-institute-head-fired-after-clashing-nation-s-president-over-deforestation; Herton Escobar, "Deforestation in the Amazon is shooting up, but Brazil's president calls the data 'a lie'," *Science*, American Association for the Advancement of Science, July 28, 2019, https://www.science.org/content/article/deforestation-amazon-shooting-brazil-s-president-calls-data-li.

[50] Andrew Gilder and Olivia Rumble. "Implications of the COVID-19 Pandemic for Global Climate Change Responses," South African Institute of International Affairs, July 1, 2020: 6.

countries in which sustainable development was a relative priority, including Canada, have taken a step back in their climate change mitigation efforts. For many nations, the government prioritized economic recovery and public health, devoting the most time and money to these immediate, short-term issues; for example, governments offered stimulus payments to businesses to offset the financial losses incurred by lockdowns and spent money on research, public healthcare, and vaccine rollouts. It seems that a sustainable growth model is a luxury of "normal" (i.e., non-pandemic) economic times. In the case of Brazil, for example, between 2019 and 2020, there was a sharp decline in both FDI net inflows and annual percent change in GDP, and we do not yet have access to data from 2021. This in turn, may have affected Bolsonaro's ability to pursue a sustainable growth model.

Thus, when making comparisons between the Workers' Party presidents and Bolsonaro, we must take into account the pandemic's effect on government policies. It may be the case that Bolsonaro chose a resource-intensive growth model in order to recover from the pandemic. However, Bolsonaro aggressively resisted taking action to combat the pandemic. He refused to follow recommendations from the World Health Organization or other health officials, said publicly that the pandemic was a "fantasy" or at worst a "small flu," and actually led protests against social distancing at the height of the pandemic.[51] In addition, Bolsonaro indicated during his campaign and the first year of his presidency (before the onset of the pandemic) that he was committed to a resource-intensive growth model, as we explain in this paper. For these reasons, we do not believe that the pandemic substantially impacted Bolsonaro's choice of economic growth model.

[51] Elize Massard da Fonseca, Nicoli Nattrass, Luísa Bolaffi Arantes, and Francisco Inácio Bastos, *Coronavirus Politics: The Comparative Politics and Policy of COVID-19* (Ann Arbor: University of Michigan Press, 2021), 496.

Data

We now turn to our empirical examination of the growth model choices pursued by the Workers' Party vs. Bolsonaro Presidencies. Our main findings are summarized in Table 1. The cases of the Workers' Party presidencies of the 2000s and the 2010s and of Jair Bolsonaro in the past three years demonstrate that the political ideology championed by a head of state can explain why certain governments in developing countries have adopted climate change mitigation measures and sustainable growth models whereas others have not, leaning instead toward a more resource-intensive growth model. We demonstrate this by taking a look at the professionalization of activism, the neoextractivist policies, and the constituencies of the Workers' Party presidencies. We also consider the centralization of environmental governance, the total extractivist policies, and the constituency of President Bolsonaro. We then discuss evidence against alternative explanations for the conditions under which governments opt for a sustainable or a resource-intensive growth model.

Table 1. Summary of Potential Alternative Explanations: Workers' Party vs. Bolsonaro Presidencies

	Workers' Party Presidencies (2003-2016)	**Bolsonaro's Presidency (2019-present)**
Political Ideology	Left-leaning	Right-leaning
Indigenous Activism	Limited impact	Limited impact
Globalization Pressure	Increasing	Decreasing
Economic Growth	High, yet declining	Low, but stagnating
Outcome	Less resource-intensive growth model	Resource-intensive growth model

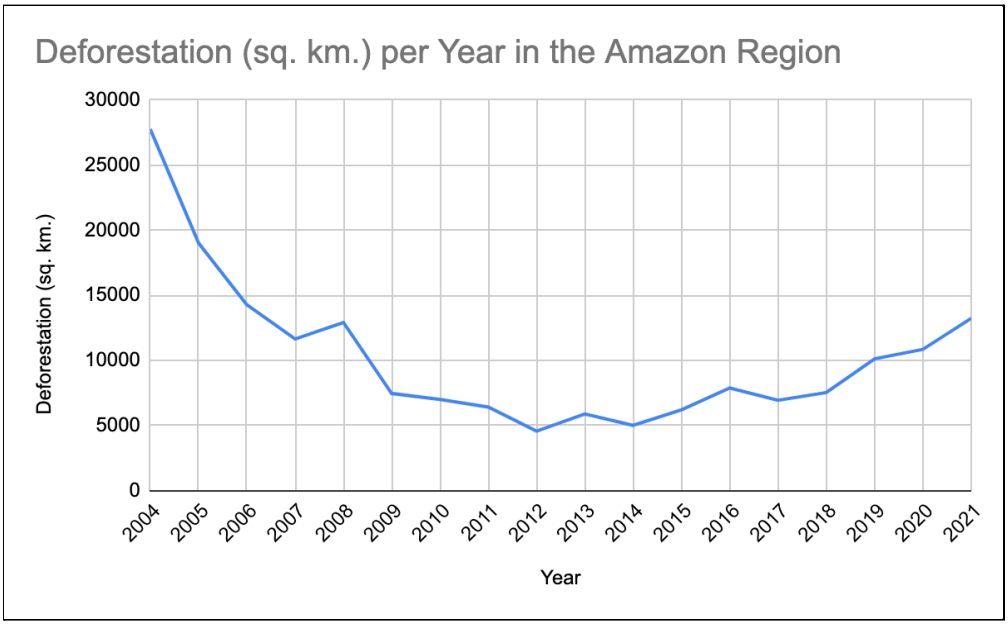
Outcomes

The Workers' Party chose a less resource-intensive growth model relative to Bolsonaro's more resource-intensive growth model. First, notable progress in deforestation was made during the Workers' Party presidencies. The deforestation rates were down by 84% in 2012 compared to the peak year of 2004 (see Figure 1).[52]

It is important to note that for all the environmental progress they may have enacted, Lula and Dilma demonstrated an "inability and unwillingness" to pursue radical environmental policies—despite the preferences of their electorate.[53] As exhibited in Figure 1, both oil and soybean exports saw a net increase from 2003 to 2016. In 2003, oil exports comprised 3.46% of GDP and soybean exports comprised 5.59% of GDP. By the end of the Workers' Party presidencies in 2016, however, these had risen to 5.99% and 10.3%, respectively. The Workers' Party presidents also maintained conservative and extractivist policies through the partly and fully privatized companies of Petrobras (oil) and Vale (mining)—both the biggest of their kind in the region.[54] In fact, "Lula's second term… saw a major, state-funded push to support new large infrastructure projects, agribusiness, and recent oil discoveries."[55]

[52] "Climate Governance: Assessment of the government's ability and readiness to transform Brazil into a zero emissions society," *Climate Action Tracker*, February 2022, climateactiontracker.org/documents/1015/2022_02_CAT_Governance_Report_Brazil.pdf: 7.
[53] Bull and Aguilar Stoen 2015, *op. cit.*, 119.
[54] Ibid.
[55] Hochstetler 2017, *op. cit.*, 267.

Figure 1: Deforestation in the Amazon region (2004-2021)

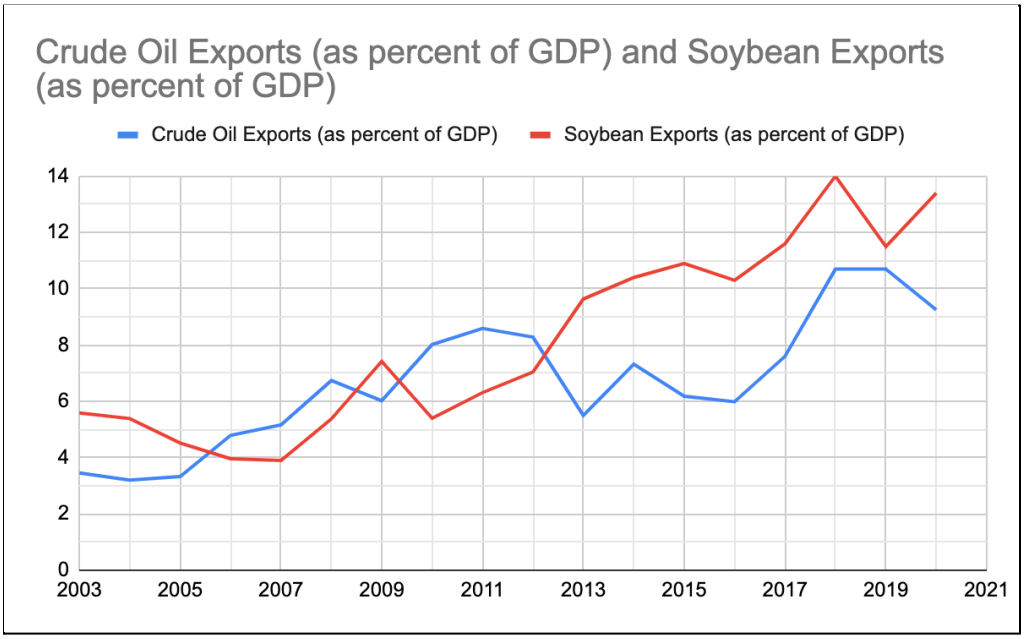


Source: Instituto Nacional de Pesquisas Espaciais (INPE)

On the other hand, Bolsonaro's resource-intensive growth model is evident in the rollbacks on some of the relatively little environmental progress made in the Workers' Party presidencies. From August 2020 to July 2021, deforestation increased by 22% in comparison to the same period of the previous year. This surge made deforestation the highest it had been in 15 years, greatly cutting back on the progress that had been made during the Workers' Party presidencies.[56] As a result of rising deforestation, cropland for soybeans has increased. Soybean exports' share of GDP increased from 11.5% to 13.4% from 2019 to 2020 under Bolsonaro (see Figure 2).

[56] "Climate Governance: Assessment of the government's ability and readiness to transform Brazil into a zero emissions society." *Climate Action Tracker*. February 2022, climateactiontracker.org/documents/1015/2022_02_CAT_Governance_Report_Brazil.pdf: 7.

Figure 2. Crude Oil and Soybean Exports as Percent of GDP



Source: Observatory of Economic Complexity

Case 1: Workers' Party

In Latin America, the leftist "pink tide" has been characterized as one particularly mindful of environmental conservation alongside indigenous land rights. This section will discuss how the tenure of the leftist Workers' Party (PT) Brazilian presidents Lula da Silva (2003-2010) and Dilma Rouseff (2011-2016) saw these environmental concerns play out through the professionalization of activism and the implementation of neoextractivist policies—to both the benefit and disappointment of their constituents.

The first mechanism by which the left-wing presidencies of Dilma and Lula were able to enact a sustainable growth model was through the *appointment of environmental activists and experts to the professional bureaucracy*. Two of the three Ministers of the Environment during the Lula and Dilma presidencies were associated with environmental parties and movements,

while the third one was a technocrat with previous involvement in the Ministry.[57] The first of these was Marina Silva, who herself "worked to improve the environmental bureaucracy."[58] Silva herself represents a shift during the 2000s in Brazilian environmental activism whereby former activists were able to secure national political offices.[59] This change in the "profile of activism" was characterized by a move from informal protests to "legitimate scientific knowledge and technical partnerships with the government."[60] Taking these partnerships a step further, activism was professionalized during the Silva tenure through the appointment of environmental activists to the bureaucracy. Lula eliminated temporary positions in many government agencies and set up a meritocratic hiring system by which 188,000 new civil service jobs were created.[61] The Ministry of the Environment was one of the ministries affected by this change; it went from being populated by consultants in the 1990s to a variety of temporary meritocratic positions in 2005 to permanent meritocratic positions in 2008.[62] In that same year, Silva resigned over tensions "between an environmental base that expected larger achievements from her and a broad coalition of political and economic actors who minimized the importance of environmental considerations," according to Hochstetler.[63]

Silva was then replaced by Carlos Minc, an urban environmental leader that continued Silva's climate change legislation and emission policies. Despite his activist background, however, Minc appointed fewer environmental activists and academics for leadership positions in the Ministry of the Environment.[64] A technical employee for the Brazilian Institute of

[57] Hochstetler, *op. cit.*, 266.
[58] Ibid.
[59] Alonso and Maciel 2010, *op. cit.*, 300.
[60] Ibid, 301.
[61] Rebecca Neaera Abers, "Bureaucratic Activism: Pursuing Environmentalism Inside the Brazilian State," *Latin American Politics and Society* 61, no. 2 (2019): 27.
[62] Ibid.
[63] Hochstetler 2017, *op. cit*., 267.
[64] Ibid, 268.

Environment and Natural Resources (IBAMA), Izabella Teixeira served as Secretary General for Minc and became Interim Minister of the Environment when he left. She then served as Minister during Dilma's administration. "Almost two-thirds of [Dilma's] appointments to leadership positions were career public servants," which represented a drastic change from the many civil society leaders that Silva appointed to his Ministry, according to Hochstetler.[65] Nonetheless, bureaucrats and permanent civil servants within the Ministry of the Environment during Dilma's presidency would still push back against superiors in favor of anti-poverty programs "that promoted the empowerment of traditional communities for the sake of forest protection."[66] In this way, Abers argues, bureaucrats in the Ministry of the Environment during Dilma's presidency would often act as activists, working in favor of environmentalist concerns.[67]

The second mechanism by which the Workers' Party presidencies from 2003-2016 sought to pursue a sustainable development growth model is through *the degree of extractivism pursued*: neoextractivist as opposed to total extractivism. Menezes and Barbosa explain that both Workers' Party presidents championed "ecological modernization" and the "neoextractivism" of natural resources in order to provide for the development and welfare of citizens.[68] Following Acosta's understanding of neoextractivism as greater state involvement in the accumulation and exploitation of resources with social ends in mind, it is fair to say that both Lula and Dilma pursued this model of extractivism. Extractivism didn't necessarily pause or decrease during the Workers' Party presidencies, as evidenced by the data we have collected—it simply took on a different name. For instance, in clear pursuit of neoextractivism, Lula reformed oil policies by ensuring the nationalization of a company to monitor offshore sea oil reserves and thus ensure its

[65] Ibid.
[66] Abers, *op. cit.*, 22.
[67] Ibid.
[68] Menezes and Barbosa, *op. cit.*, 231, 234.

revenues would benefit the Brazilian people; whereas Dilma sought to raise the royalties in the mining industry.[69]

The third mechanism concerns the constituency of each political party. Because the constituencies of both Lula and Dilma included both environmentally-conscious coalitions as well as business-centric sectors, there existed a tension between social movements, rural populations, and corporate interests that was not present with Bolsonaro's administration. Abers notes that during Lula's first administration, relations between the government and certain movements were close, especially in social and environmental policy areas.[70] As Menezes and Barbosa explain,[71] the Workers' Party's promotion of environmentalism "was displaced as the government aligned with its broader political coalition" once in power.[72] Over time, a distancing between the Workers' Party government and many movements occurred as Lula enacted policies and allied with interests that the movements criticized, further distancing himself from these environmental movements.[73] His efforts to reduce poverty took center stage over environmental policy, and during his first term, the government invested in big infrastructure projects like the Belo Monte dam "despite devastating environmental impacts."[74] At the same time, many groups pushed back against such projects, including independent international experts, numerous indigenous tribes, and environmentalists. Such alliances and coalitions have in some way deterred under dam and construction projects in Brazil.[75] There is, therefore, reason to suggest

[69] Bull and Aguilar Stoen 2015, *op. cit.*, 120.
[70] Abers, *op. cit.*, 21.
[71] Menezes and Barbosa 2021, *op. cit.*, 231-234.
[72] Wendy Hunter. *The Transformation of the Workers' Party in Brazil*, 1989-2009, (New York: Cambridge University Press, 2010), 2.
[73] Ibid.
[74] Ibid, 28.
[75] Sara Diamond and Christian Poirier, "Brazil's Native Peoples and the Belo Monte Dam: A Case Study," *NACLA Report on the Americas* 43, no. 5 (2020): 29.

that pressure from Lula's and Dilma's constituency brings added pressure from them to pull back from more unsustainable corporate interests.

Having explained the mechanisms of government ideology, we now turn to the validity of our alternative explanations in the case of the Workers' Party: indigenous activism, globalization pressures, and economic profile. A preliminary assessment of the Workers' Party's presidencies and Bolsonaro's presidency show a stark difference between government *intent* and actual government policy in regards to the role of indigenous actors in environmental policy. Throughout Lula's presidency, there was an effort to be sensitive to indigenous rights. For example, in 2007, Brazil voted on the UN Declaration on Rights of Indigenous Peoples. In media channels, both Lula and Dilma promoted the expansion of hydroelectric dams like the Belo Monte dam as a "model of green, renewable energy."[76] Former Minister of Environment, Carlos Minc, reiterated that such infrastructure projects would not displace "a single Indian."[77] Lula's verbal commitments to indigenous populations continued well after his presidency, especially during his presidential campaign in 2022, where he promised to recognize indigenous land claims and stop illegal mining.[78] However, despite government intent and commitment to the constitutional rights of indigeneity, the Belo Monte project, as well as mining projects and transmission line construction, were all conducted without consultation from indigenous communities, yet disproportionately displaced people of the Kayapó, Arara, Juruna, and Xipaia tribes. In addition to lack of government agency monitoring of Brazil's 24,000 dams, both Lula and Dilma consistently violated the guarantee of non-intrusion in The Xukuru tribe's area.[79] The

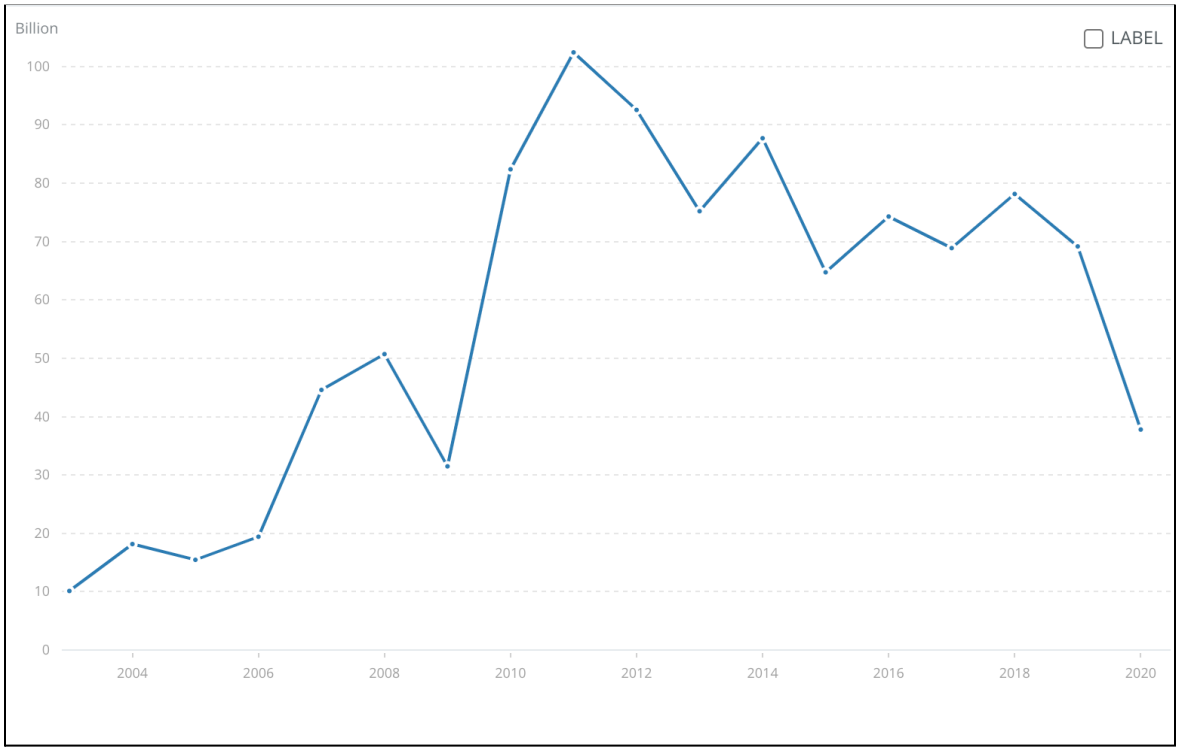
[76] Ibid, 26.
[77] Ibid.
[78] Anthony Boadle, "Brazil's Lula promises indigenous tribes he will reverse Bolsonaro measures," *Reuters*, April 12, 2022, https://www.reuters.com/world/americas/brazils-lula-promises-indigenous-tribes-he-will-reverse-bolsonaro-measures-2022-04-12/.
[79] Salo de Carvalho, David R Goyes, and Valeria Vegh Weis, "Politics and Indigenous Victimization: The Case of Brazil," *The British Journal of Criminology,* 61 (1), (2021): 259.

policy outcomes of the Workers' Party's presidencies indicate little to no effort in catering towards the preferences indigenous actors.

Globalization pressures also play a limited role. Throughout the Workers' Party presidencies, there were increasing levels of FDI. In 2003, the beginning of Lula's presidency, foreign direct investment net inflows were $10,123,013,671. At the end of Silva's presidency, net FDI inflows had risen to $82,389,932,468. The end of Dilma's presidency in 2016 saw net FDI inflows of $74,294,627,801.[80] If globalization pressures were a causal factor in a government's decision to opt for a resource-intensive growth model, we would expect governments under Workers' Party leadership to exhibit lower levels of foreign direct investment due to their more pro-environmental outcomes. Therefore, the increasing FDI net inflows throughout the Workers' Party leadership in Brazil indicates that globalization pressure is not the mechanism leading them to opt for a more sustainable growth model in comparison to the Bolsonaro presidency.

[80] World Bank, "Foreign direct investment, net inflows (BoP, billions of dollars) – Brazil," The World Bank Group, Accessed April 12, 2022, https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD?locations=BR.

Figure 3: Brazil's Foreign Direct Investment net inflows from 2003-2020 (billions of USD)



Source: World Bank Open Data

Throughout the Workers' Party presidencies, GDP continued to increase annually. On average, Brazil's GDP increased by 2.5% annually under the Workers' Party presidencies, from 2003 to 2016. However, GDP experienced a precipitous decline since 2010, one year before Lula's presidency ended and Dilma's began. While annual percent change in GDP under Lula was 4.079%, it was 0.43% under Dilma, which indicates a slower rate of growth. In particular, Brazil's GDP declined by over 3 percent between 2014 and 2015 and between 2015 and 2016.

The same policies and circumstances that enabled major growth during the Lula administration, in practically every year except 2009, may have contributed to economic struggles during the Dilma administration.[81] Lula enabled economic regimes to become more

[81] Eduardo Costa Pinto et al., "The Political Economy of Brazil Under the Presidency of Dilma Rousseff: Accumulation, Bloc in Power and Crisis," Brics Hypothesis, April 2016, at 2.

flexible, with fewer external constraints and more welfare programs.[82] His dedicated anti-poverty reforms were also encouraged by a very favorable international environment that allowed for unusually fast accumulation of capital in Brazil.[83] Lula collaborated with a number of actors, including banks upon which he relied for financing, but this alliance was tenuous at best and could not be sustained once he left office.[84]

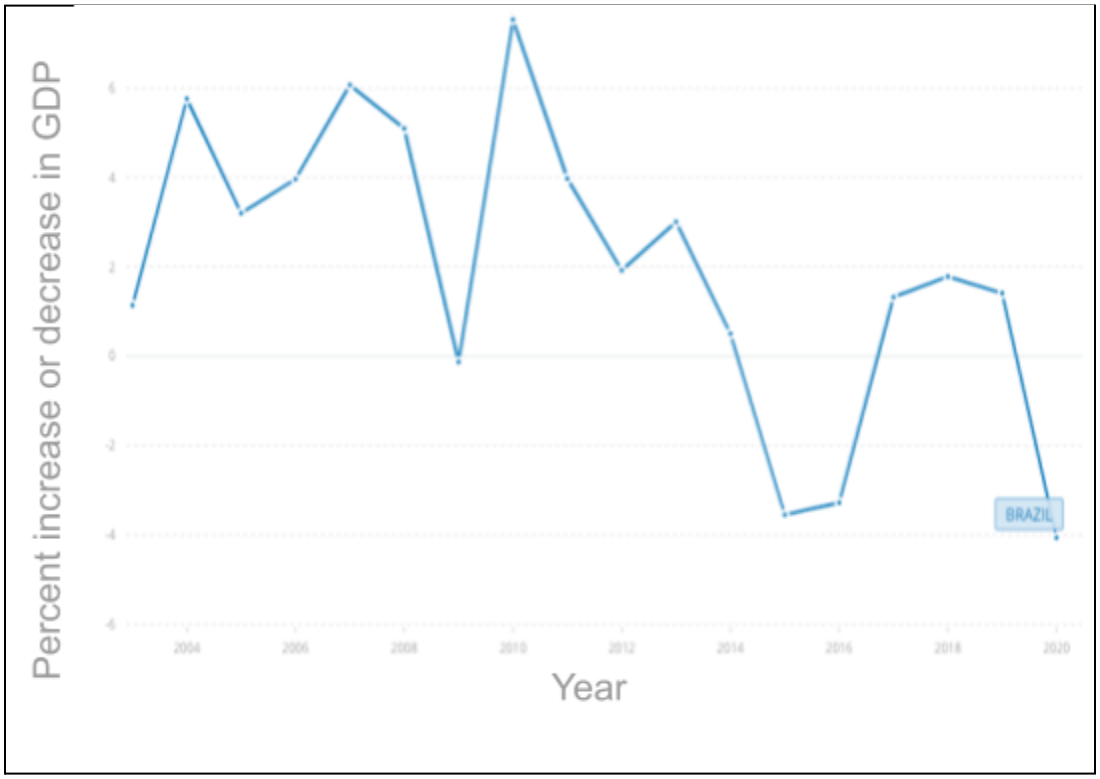
As discussed above, we merged the Workers' Party presidencies for the purpose of our study based on the apparent consistency between the two administrations of Lula and Dilma, as supported by the literature. While GDP declined substantially in the last two years of Dilma's administration, as a whole, Brazil under the Workers' Party experienced constant—albeit inconsistent—growth in GDP. In particular, we can argue that the nation's economic profile remained the same throughout the Workers' Party presidencies, as Lula's policies shaped the decline of the economy during Dilma's presidency.

If the nation's economic profile were the primary driver of the government's choice of growth model, we would expect that as Brazil's economy continued to grow (as it mostly had since 1961), then the government would be less likely to select a resource-intensive growth model.[85] While economic growth at first can result in more pollution due to increasing manufacturing, once a country has experienced a sustained period of growth—such as that of Brazil since 1961—then pollution can decline as that country begins to rely on or develop more sustainable, green technologies.[86]

---

[82] Ibid, 3.
[83] Ibid, 4.
[84] Ibid, 5.
[85] World Bank, "GDP growth (annual %) – Brazil," The World Bank Group, accessed April 12, 2022, https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2020&locations=BR&start=2003.
[86] Spilker et al., *op. cit.*, 8.

Figure 4: Annual rate of change in Brazil's GDP (%), 2003-2020



Source: World Bank Open Data

Case 2: Bolsonaro

Current Brazilian president Jair Bolsonaro's approach to the environment is a paradigmatic representation of right-wing policies "anchored in market interests irrespective of the environmental costs."[87] Among many strategies, Bolsonaro has adopted a sort of environmental populism derived from authoritarian populism by delegitimizing critics, denying climate change, and curtailing participation.[88] He has also leveled rhetorical attacks against indigenous people with the political purpose of delegitimizing their environmental claims and has also tried to review demarcated indigenous lands for extractivist purposes.[89] This section will

[87] Menezes and Barbosa, *op. cit.*, 231.
[88] Ibid, 232-33.
[89] Ibid, 240.

mainly focus on how Bolsonaro has centralized environmental governance in Brazil and how he has implemented a policy of total extractivism, in order to respond to the extractivist interests of his constituency and allies.

One of the mechanisms Bolsonaro has used to carry these right-wing, resource-intensive policies out includes weakening Brazilian environmental governance by dismantling institutional mechanisms for environmental protection and concentrating authority vertically in the federal government.[90] For example, the Bolsonaro administration has substantially weakened the power and budget of the Ministry of Environment. In 2021, he approved a total budget cut of 24% compared to 2020.[91] Ricardo Salles was also appointed as Minister of the Environment, despite his previous involvement in agribusiness lobbying and being found guilty of malfeasance and other environmental crimes.[92] Other institutional changes by which Bolsonaro has centralized and weakened environmental governance include abolishing the National Commission for the Sustainable Development Goals, eliminating the Secretariat of Climate Change and Forests in the Ministry of Environment, and the replacement of career experts for military personnel in environmental management positions.[93] His administration has also reduced the number of seats in the National Environmental Council (CONAMA) by more than two thirds, effectively reducing civil society's access to spaces of environmental decision-making.[94]

A second mechanism by which the current Brazilian president has enacted a resource-intensive growth model includes the pursuit of total extractivism. In the name of economic growth, Bolsonaro has also garnered the support of extractivist interests and allies in

---

[90] Ibid, 231-32, 242.
[91] "Climate Governance: Assessment of the government's ability and readiness to transform Brazil into a zero emissions society." *Climate Action Tracker*. February 2022, climateactiontracker.org/documents/1015/2022_02_CAT_Governance_Report_Brazil.pdf
[92] Mairon G. Bastos Lima and Karen Da Costa, "Quo vadis, Brazil? Environmental Malgovernance under Bolsonaro and the Ambiguous Role of the Sustainable Development Goals," *Bulletin of Latin American Research* (2021).
[93] Ibid.
[94] Menezes and Barbosa, *op. cit.*, 239.

the agribusiness, mining, and logging industries. Since his term began, there has been rollback on policies protecting the forests in order to expand cropland. As mentioned above, the deforestation rate has also evidently risen throughout the Bolsonaro presidency, to the highest it had been in 15 years. The aforementioned rhetorical attacks Bolsonaro has leveled against defenders of the environment—such as activists and ingidenous people—have thus allowed him to frame environmental devastation as necessary, not just acceptable, for economic development.[95] Similarly, his administration has repeatedly focused its efforts on allowing for extractivism in the territories of 180 indigenous groups. Menezes and Barbosa explain that Bolsonaro has effectively transitioned "from a neodevelopmentalist to a developmental agenda that directly positions environmental governance at the service of extractivist interests."[96]

A third mechanism by which Bolsonaro has pursued a resource-intensive growth model includes allies and voters with interests in the extractivist sector. Bolsonaro's emphasis on national security, on the other hand, linked his government with agribusiness, mining, religious and military sectors. These alliances were particularly solidified with the establishment of Frente Parlamentar da Agropecuária (Agricultural Parliamentary Front), Frente Parlamentar Evangélica (Evangelical Parliamentary Front) and Bancada da Bala (Bullet Stand).[97] The Frente Parlamentar da Agropecuária, commonly known as the *bancada ruralista,* a cross-party political caucus of deputies and senators with powerful agribusiness interests in congress, has gained influence in the last few years.[98] Bolsonaro filled his cabinet with members of this caucus, who are notorious for prioritizing development over environmental protection and have pushed for many of the reforms Bolsonaro has implemented thus far. Furthermore, "the current administration's

[95] Menezes and Barbosa, *op. cit.*, 242.
[96] Ibid.
[97] de Carvalho, Goyes, and Weis 2021, *op. cit.*, 261.
[98] "Climate Governance: Assessment of the government's ability and readiness to transform Brazil into a zero emissions society." *Climate Action Tracker*. February 2022, climateactiontracker.org/documents/1015/2022_02_CAT_Governance_Report_Brazil.pdf: 22.

environmental governance is directed exclusively towards allies in the extractivist sector (e.g., large-scale monoculture, ranching, mining, loggers, land grabbers, and others)."[99] The power of agribusiness interest groups in the Bolsonaro administration make it unlikely that environmental activists can influence policy making.

The situation of indigenous activism is even more dire in Bolsonaro's administration, whose explicit ties with unsustainable sectors directly undermine indigenous rights and claims. Bolsonaro's administration, unlike Lula and Dilma, had clear malintent regarding policies on indigenous communities. This is evident from his rhetoric in his presidential campaign and throughout his presidency. For example, in an interview in 2015, he refused to acknowledge indigenous people as a collective or as individuals subject to rights, saying, "The Indians don't speak our language, they don't have money, they don't have culture. They are native peoples. How do they manage to have 13% of the national territory."[100] On other occasions, he has advocated for forced integration of indigenous people, dismantling FUNAI, abolishing existing indigenous territories, and prioritizing mining and agribusiness on indigenous land. This rhetoric has matched many actual government actions regarding indigenous peoples. Bolsonaro stripped away indigenous protections and suspended the demarcation of 27 Indigenous territories, thus preventing many tribes from exercising legal rights over their lands.[101] He also issued Ordinance 80 to move the demarcation process from FUNAI to the Ministry of Agriculture. Other policy rollbacks implemented at the expense of indigenous peoples include easing rules on environmental fines, allowing timber export without authorization, and abolishing many

[99] Menezes and Barbosa, *op. cit.*, 231.
[100] Antonio Marques and Leonardo Rocha, "Bolsonaro diz que OAB só defende bandido e reserva indígena é um crime," *Campo Grande News*, April 22, 2015, https://www.campograndenews.com.br/politica/bolsonaro-diz-que-oab-so-defende-bandido-e-reserva-indigena-e-um-crime
[101] Human Rights Watch, "Brazil: Reject Anti-Indigenous Rights Bill," *Human Rights Watch Report*, August 24, 2021, https://www.hrw.org/news/2021/08/24/brazil-reject-anti-indigenous-rights-bill.

committees and commissions for "civil participation and social control in the Federal Government."[102] Thus, given the hostility towards indigenous actors as well as blocking any avenue in government for indigenous representation, any form of indigenous activism is unlikely to be a mechanism in influencing Bolsonaro's growth model in any way.

Foreign direct investment net inflows during the Bolsonaro presidency have declined. In 2019, FDI net inflows were $69,174,411,753. Inflows declined to $37,786,286,307 in 2020.[103] If globalization pressures caused governments to opt for resource-intensive growth models over sustainable development models, we would expect the Bolsonaro government, who opted for a resource-intensive growth model, to exhibit higher levels of foreign direct investment inflows. Contrary to expectations, however, Figure 3 indicates a decline in FDI net inflows upon the election of Bolsonaro, contrary to the general rise in FDI net inflows that occurred throughout Lula and Dilma's administrations. Therefore, globalization pressures are unlikely to be the causal mechanism leading governments to opt for resource-intensive growth models.

In terms of economic profile, there is insufficient data to show whether Bolsonaro has pulled Brazil towards a different economic profile — that is, different annual changes in GDP and different economic structures. The average annual rate of change in GDP during the interim presidency of Michel Temer was 1.554%, whereas during the first year of Bolsonaro's presidency, it was 1.441%. In the following year (2020), the World Bank's data indicates that Brazil experienced its worst decline in GDP since 1990. However, this was likely shaped by the (ongoing) COVID-19 pandemic that brought down the global economy.[104] Given the relative

---

[102] "Climate Governance: Assessment of the government's ability and readiness to transform Brazil into a zero emissions society." *Climate Action Tracker*. February 2022, climateactiontracker.org/documents/1015/2022_02_CAT_Governance_Report_Brazil.pdf.
[103] World Bank, "Foreign direct investment, net inflows (BoP, billions of dollars) – Brazil," The World Bank Group, Accessed April 12, 2022, https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD?locations=BR
[104] Organisation for Economic Co-operation and Development, "Focus on the Global Economy," *OECD*, accessed April 14, 2022, https://www.oecd.org/coronavirus/en/themes/global-economy.

stability of the world during the first year of Bolsonaro's presidency, in which the Brazilian economy was not subjected to its most severe crisis since the Great Depression, 1.441% is so far our defining GDP growth rate for him. Since this was close to the average annual change under Temer, it would appear that the nation's economic profile in terms of GDP did not change suddenly under Bolsonaro. If the economic profile argument were true, then since Brazil's actual economic profile did not change when Bolsonaro took power, he could not have engineered a shift from a more sustainable growth model to a more resource-intensive growth model. As previously discussed, there is substantial evidence to indicate that Bolsonaro's policies relied more heavily on the exploitation of natural resources, which violates the hypothesis of the economic profile argument.

Conclusion

We argue that more ideologically conservative heads of state will choose a resource-intensive growth model over a sustainable development model. In examining different explanations centering around government ideology, indigenous activism, globalization pressure, and economic profile, we found that government ideology ultimately drives the choice of growth model primarily through the mechanism of bureaucratic appointments. For the case of Brazil, we found that the Workers' Party presidents appointed more environmental activists as bureaucrats, such as Marina Silva, allowing them greater influence over Workers' Party policies, whereas Bolsonaro weakened the power of government environmental agencies and removed high-ranking bureaucrats from them, therefore limiting their ability to continue their work on monitoring and preventing unsustainable development practices.

In contrast to the positive effect of activist bureaucrats, indigenous activism played a minimal role in the choice of growth model. Though the Workers' party exhibited intent to cater to indigenous demands, actual policy outcomes of the Workers' Party's presidencies indicate little to no effort in catering towards the preferences indigenous actors. Bolsonaro's presidency has exhibited clear malintent toward indegineous demands, both rhetorically and through policy. Furthermore, globalization pressures exerted contradictory influence on the two cases, with the more pro-environmental Workers' party presidencies exhibiting higher FDI net inflows than during Bolsonaro's presidency. In addition, Brazil's economy remained relatively stable, as measured by GDP growth rates, indicating that economic changes cannot account for Bolsonaro's choice to shift towards a more resource-intensive growth model.

These findings have important policy implications when thinking about coordinated responses to climate change in developing governments. As the case of Brazil shows, while government ideology mattered the most, inside pressure through a "professionalization of activism" influenced this government ideology by driving policies and the direction of the administration. In developing countries with few checks and balances and where venues for democratic participation have thus weakened, applying pressure from the inside might prove more effective methods for activists to influence policy outcomes as opposed to other methods of outside influence and participation.

Given our findings, future research should focus on how to best advance the professionalization of activism in developing countries. Because the scope of our case was geographically limited to Brazil, exploring the differences between developing and developed countries as well as Brazil and other developing countries would help determine whether the influence of activists in the bureaucracy holds in other contexts.