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Pol S 203

Paper 2

Environmental Sustainability Through International Trade

10,291,926.¹ That is the total level of carbon dioxide (CO₂) emissions by kilo-Tonne (kT) in just the United States for year 2017. The United States champions the global leaderboards with 16.5 kT of CO₂ emissions per capita, being only one of three countries to produce over 10 kT of CO₂/capita in 2017.² Further, 93% of human-caused carbon emissions within the United States come from two sectors of the economy: transportation and energy.³ If we want any chance to withstand the environmental effects of global warming, we must see zero carbon emissions not only from the United States, but from the world at large by 2050.⁴

Recently, as an effort to protect the automotive industry, the Trump administration placed numerous trade barriers on automobiles and automotive parts.⁵ Straying from argument in the total existence of these barriers, this paper underscores the necessity for the Biden administration to loosen trade restrictions in the automotive industry specifically by placing an exemption status on eco-friendly automobiles and automotive parts on national tariffs and trade agreements, to promote environmental sustainability in this sector. Following these actionable items, this paper will examine the costs and benefits associated with this plan to the nation as a whole, while analyzing the winners and losers from trade, with compensation plans for the latter.

¹ Pettinger, "Top CO₂ Polluters and Highest per Capita"

² Ibid.

³ US Energy, "Where greenhouse gases come from"

⁴ Schwartz, "Q&A: Stanford Expert Explains Why We Continue Burning Coal for Energy"

⁵ Trump, "Adjusting Imports of Automobiles and Automobile Parts"

First, the Biden Administration should take steps to undo the tariffs and trade regulations on automotive imports made during the Trump administration. Following the Ricardo-Viner approach to international trade (stating that the most relevant actors are the industrial sectors within a country), the United States established protectionist policies under the Trump administration to keep the domestic automobile industry from crumbling under foreign competition.⁶ These policies included trade barriers such as tariffs (taxes) and quotas (limits) on automotive imports and non-tariff barriers such as government regulation.⁷ One example of such regulation is the United States-Mexico-Canada Agreement (USMCA) requiring 40% of an automobile's parts to be produced by a worker earning \$16 or more per hour (to encourage production in higher income countries, e.g. The United States).⁸ In respects to these policies, the Biden administration should place an exemption on said tariffs, quotas, and regulations for environmentally friendly automobiles and automotive parts, whose specific benchmark characteristics should be defined elsewhere. For tariffs, this would look like lifting the trade restrictions that are taxes on imported goods so that either finished eco-friendly automobiles or automotive parts for eco-friendly automobiles may be imported without extra cost. With the USMCA, the United States should incentivize manufacturers in Mexico and Canada to export environmentally friendly cars or parts by reducing the 40% threshold of higher-wage workers to 20% (only in the case of eco-friendly car production). By alleviating these trade restrictions, we will see that the supply of automobiles suitable for progress towards environmental sustainability will increase in the United States, with a domino effect of other ways the Biden administration can move forward in this economically advantageous agenda.

⁶ Frieden, Lake, and Shultz, "World Politics: Interests, Interactions, Institutions," 309.

⁷ Ibid., 304

⁸ Nakayama, "Japan Auto Companies Triple Mexican Pay Rather than Move to US"

Before delving into the economic and environmental benefits of this plan, it is important to consider all substantial costs in allowing additional imports into the US economy. The main concern for policymakers is the United States' trade deficit, which this policy will only add to (as it requires the US to purchase more imports from other countries). Other costs to the country are the unrealized gains from decreasing domestic production and lost opportunity to export additional automobiles and automotive parts. While these costs are real, they are minimal in comparison to the potential benefits. This is because the amount traded is only a sliver of the United States trade deficit or GDP, meaning that the negative economic effects of this policy will not only be invisible, but will even be made up for after realizing the gains from trade.

The first, and main, benefit of this plan to the country as a whole is the additional supply of eco-friendly automobiles in the US market. Of all the contributors to CO2 emissions in the United States, we, the people, are most responsible. 46% of all CO2 emissions come from burning petroleum fuels, associated directly with the fuel-costly cars in the transportation sector.⁹ The main effect of this plan to the country as a whole is that it will shift the supply curve of environmentally sustainable automobiles to the right, since at every price of the good the quantity supplied by the market will increase (imported from foreign firms). As the supply curve of these automobiles shifts to the right, we will see that the market price will decrease due to a greater quantity being available in the market and thus with the law of demand, as the relative price of a good decreases, the quantity consumed of that good will increase. Since eco-friendly cars are an elastic good, one which can be substituted easily by consumers, we will find that a small change in price will lead to a large change in quantity consumed, thus having a significant impact on the environmental outcome of this policy.

⁹ US Energy, "Where greenhouse gases come from"

The economic benefit of reducing trade restrictions is general movement towards the pareto frontier, called pareto improvement, which moves the international system closer to a point where everyone will be better off (or unharmed) while no one is worse off.¹⁰ In general, it makes sense to engage in international trade because the costs of producing automobiles and automotive parts are much higher in the United States, in terms of other goods/services we could be providing, than in other developing countries, where labor is their most abundant factor of production and thus labor-intensive goods their preferred good for production. To the country as a whole, the United States gains from trade because it can purchase goods other countries are better at making (goods in which they have the comparative advantage), and produce goods in which it has the comparative advantage in making (capital-intensive goods, like computers and specific machinery, not automotive parts).¹¹

Additional economic benefits to the United States as a whole include the concessions to be earned from allowing increased foreign imports of eco-friendly automobiles. Concessions, in this sense, allude to the reciprocities of international trade, where in return for one country providing a benefit to another, such as increasing their imports, the other country will provide something of benefit to the first country, which can be limiting their exports, purchasing greater imports, and so on.¹² The concession I believe would best fit this plan would be an increase in the export of coal, specifically to the countries whom we had just purchased automobiles. After transportation, energy production from burning coal emits the second-most greenhouse gases, producing 21% of all CO₂ emitted.¹³ To move forward on our path to zero carbon emissions by 2050, the United States should not only begin to reduce the amount of coal it produces per year,

¹⁰ Frieden, Lake, and Shultz, "World Politics: Interests, Interactions, Institutions," 317.

¹¹ *Ibid.*, 298

¹² *Ibid.*, 325

¹³ US Energy, "Where greenhouse gases come from"

but it should also, as a concession, negotiate increased exports of coal in lieu of foreign production of coal to generate revenue and rid themselves of this cheap pollutant. Japan and South Korea, for example, are two of the United States' top five export destinations for coal (in quantity exported), making them perfect targets for negotiation.¹⁴ As the United States transitions from coal to renewable, sustainable sources for energy, it can also use gains from trade (export revenues conceded from importing automobiles) to further research and development of nuclear energy, if not wind, solar, or hydro-powered energies, to move towards complete independence from coal in the future.¹⁵

Like any international trade policy, placing an exemption status on eco-friendly automobiles will produce winners and losers within the United States. The primary winners from this interaction will be the domestic consumers. With increased trade restrictions, consumers ultimately pay the price for inefficient production, since the cost of importing increases and instead of paying the cost themselves, exporters pass it onto consumers by raising the price of their goods.¹⁶ Here, the opposite happens: trade restrictions are loosened so that the market price of eco-friendly cars decreases (not only because of the shifting supply curve but the price imposed by foreign firms). This is a huge win for consumers because the main impediment from purchasing eco-friendly automobiles are their price tags, with the most models out of range for the average American (around \$40,000).¹⁷ Other winners are the domestic exporters of coal, who gained from the reciprocities of trade, and politicians like yourself, Mr. President, who will gain support from the increasing number of environmental activists in the United States.

¹⁴ US Energy, "Coal imports and exports"

¹⁵ Schwartz, "Q&A: Stanford Expert Explains Why We Continue Burning Coal for Energy"

¹⁶ Nakayama, "Japan Auto Companies Triple Mexican Pay Rather than Move to US"

¹⁷ Young, "America's Most Eco-Friendly Vehicles"

On the other hand, those at loss from increased international trade include domestic manufacturers, workers at those plants, and exporters of automobiles and automotive parts. Domestic producers are at loss because of the lost opportunity to increase revenues, prices, and wages that occur with restricted foreign competition.¹⁸ Instead, we will see that the hourly wage of workers in these manufacturing plants will decrease with increased foreign competition. The hardest hit firms will likely be those already producing environmentally sustainable automobiles for the US market, since their profits will decrease due to the change in market price and quantity available of other eco-friendly imported cars. Compensation to those at loss from this program will be the most difficult decision to make under the Biden administration, mainly because it is the only thing that will not be free. Here, the government should provide Trade Adjustment Assistance to workers harmed by foreign trade, whether in the form of tax credits, retraining programs, or outright grants.¹⁹ Another option is to tax the consumers who gained the most from this policy in order to provide benefits to the workers who lost their jobs due to foreign trade.²⁰ Without some form of compensation, any action to this policy will be met with heavy opposition.

In summary, by reducing trade restrictions in the automotive industry, specifically for environmentally sustainable automobiles and automotive parts through reduced tariffs, quotas, and regulations, the United States will be able to work towards zero carbon emissions by 2050. Since environmental sustainability cannot be described in pecuniary terms, it is imperative that future damage from carbon emissions are considered in their totality. Climate change can no longer be ignored by the White House. It is in the interest of the United States, not only to preserve biodiversity on Earth and meet international standards, but to keep the planet alive.

¹⁸ Frieden, Lake, and Shultz, "World Politics: Interests, Interactions, Institutions," 307.

¹⁹ *Ibid.*, 333.

²⁰ *Ibid.*, 317.

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