Subsidizing fossil fuel consumption has increased the income gap in the world's population, since these subsidies have primarily benefited individuals with greater wealth. Globally, it is estimated that, in 2010, only 8% of the subsidies for fossil fuel consumption reached the poorest 20% of the world's population. Additionally, these subsidies have raised pollution levels and the incidence of respiratory diseases by increasing the world's greenhouse gas (GHG) emissions on a significant scale. It is estimated that if these subsidies were to be completely eliminated by 2020, the worldwide GHG emissions would be 10% lower by 2050, compared to a scenario where the subsidies remain unchanged. Subsidizing energy is not only inefficient but also very costly to taxpayers. Subsidies for gasoline, diesel, LP gas, and electricity in Latin America consume 2% of all total government revenues in the region.

The case of Mexico is particularly troubling. Until 2014, gasoline consumption was subsidized. Prior to 2014, the Mexican government tended to invest a significant amount of public resources in this subsidy, consequently reducing expenditure in other areas like health care or social assistance. In 2012, for example, the gasoline consumption subsidy was greater than the health expenditure of the Mexican Social Security Institute.[1] Meanwhile, during the same year, 60.7% of the Mexican population did not have access to social security. Furthermore, the Mexican government invested more into subsidizing gasoline consumption in 2012 than into the main public poverty reduction program, called Oportunidades,[2] although around 46% of individuals were living in conditions of poverty at the time. Furthermore, this gasoline subsidy was not targeted to the Mexican low-income population; it mainly benefited the families who had access to a car, only 4 out of every 10 families on average. What is worse, the gasoline subsidy encouraged the use of cars, instead of public transportation or other non-motorized means of transportation. The intensive use of automobiles in Mexico was estimated to have a cost equivalent to 4% of the GDP in 2009, in the main urban areas, due to traffic congestion, pollution, GHG emissions, and accidents.

Starting in 2015, the Mexican government gradually removed the subsidy for gasoline consumption by implemented a tax scheme. Going forward, the current government has announced the price liberalization of gasoline beginning in 2017. This means that the price of gasoline will be driven by market conditions, with no interference from the government. However, eliminating the subsidy for gasoline is not sufficient to promote its efficient use, since the gasoline market price does not accurately reflect the negative consequences of the intensive use of automobiles (e.g. traffic congestion, pollution, GHG emissions, and accidents). In order for the price of gasoline to correctly reflect these negative externalities,
experts have calculated that the optimal tax level would have to amount to .48 cents USD per liter. Therefore, the Ministry of Finance and Public Credit of Mexico should set up a long-term plan to gradually increase taxation until the optimal level is reached, starting in 2017 with the price liberalization.

While the gasoline subsidy has been slowly decreasing in Mexico, the subsidies for electricity consumption have been rising in recent years. The economic resources invested in these subsidies increased constantly from 2007 until 2013; by 2013, the amount of money invested in this public policy equaled 0.5% of Mexico’s GDP. Currently, the Mexican government subsidizes electricity tariffs for consumption for 98.75% of the households, while producing the majority of that electricity with fossil fuels.

The subsidies for electricity tariffs in Mexico are mostly delivered to high-income consumers, since residential electricity consumption is concentrated in the highest income population. Consequently, parts of the public resources invested in these subsidies benefit mostly individuals who have elevated purchasing power. Furthermore, the electricity subsidy in the agriculture sector decreases the cost of water pumping, encouraging the overexploitation of aquifers. This could have disastrous consequences since the agricultural sector in Mexico accounts for 80% of the country’s water consumption, and currently 44% of the aquifers are already overexploited.

Furthermore, the electricity subsidy in Mexico directly affects the market for renewable energy generation. Some renewable energy generation technologies, like solar panels, are less profitable if the price of electricity is subsidized. Therefore, this subsidy encourages private households to consume government-produced electricity, instead of generating their own electricity through cleaner sources. Currently, electricity production in Mexico remains concentrated in fossil fuels, such as natural gas combined cycle plants, which have a highly negative impact on the environment.

Since the electricity consumption subsidy in Mexico is detrimental to the environment and negatively impacts the redistribution of wealth, the government could consider redistributing the resources invested in this subsidy into other public policies—for example, investing in the public education system, in order to increase the skills and productivity of the labor force. From 1992 until 2009, labor productivity in Mexico only grew 2.1%, while labor productivity increased by 82.8% in South Korea during the same period, and 64.2% in Ireland. Likewise, those public resources could be used in clean energy investments, in order to boost electricity generation through renewable energy sources. A higher clean energy supply in the country would contribute to the reduction of electricity prices—benefiting consumers through a lower cost of electricity in the future—without
harming the environment, since renewable energy does not involve GHG emissions.

In order to gradually eliminate electricity consumption subsidies in Mexico, it would be necessary for the Federal Electricity Commission to clearly disclose the current subsidy amount, since the latest available statistics date from 2013. Additionally, the general public would need to acknowledge the negative impact of these subsidies, in order to increase support to an electricity subsidy restructure. Therefore, it is vital that the Federal Electricity Commission quantifies and communicates the harmful effects of electricity subsidies to its constituents (e.g. their impact on income distribution and the environment), as well as the possible alternative uses for these resources.

Finally, it is important to note that if the subsidies were to be removed, a drastic shift in the tariffs would not be recommended; instead, a steady increase would be preferable, in order to reduce the inflationary effect for consumers. Consequently, the Federal Electricity Commission would need to develop a long-term plan to modify the electricity tariffs and to communicate that plan to the public before the policy implementation. In addition, since the increase in electricity prices would initially affect consumers’ real income, a better-targeted compensation scheme to the poorest households would be recommended.

Other less-developed countries like Ghana and Armenia have already implemented similar strategies. Therefore, eliminating the fossil fuel subsidies in Mexico is not only possible but highly desirable. In the case of electricity, these resources could be used to boost renewable energy supply, lowering the cost of electricity while not harming the environment through electricity consumption subsidies. In the case of gasoline, if the government implements a long-term strategy instead of a drastic shift in the tax levels, optimal taxation could be reached with a lower political cost than rising electricity prices. In both scenarios, a transparent use of tax revenues will be key for the population to support these policies.

A new presidential election will be held in 2018 and, Andrés Manuel López Obrador, the main leader of the opposition party and a leading presidential candidate, has promised to reduce the price of gasoline by around 50% if elected. This represents a high risk for Mexico to return to the gasoline subsidy scheme. Thus the importance of divulging the economic, social, and environmental consequences of fossil fuel subsidies. The historical impact of public policies of this nature needs to be taken into account in the upcoming debate concerning the future Mexican presidential election.

Offline References
1. John Scott, “Subsidios a los combustibles en México: Oportunidades de Reforma”, (paper presented a conference related to fossil fuel subsidies in Mexico organized by the Latin America Regional Climate Initiative, in Mexico City, September 29, 2014) ↑
2. John Scott, “Subsidios a los combustibles en México: Oportunidades de Reforma”, (paper presented a conference related to fossil fuel subsidies in Mexico organized by the Latin America Regional Climate Initiative, in Mexico City, September 29, 2014) ↑

---

**Jorge Ramírez Mata**

Jorge Ramírez Mata is an economist, focused on sustainable development, currently studying his masters in International Policy at Stanford University. Prior to his masters, he worked as a researcher in the Mexican Ministry of Environment and Natural Resources, most recently, as Project Manager in CIDAC, the oldest think tank in Mexico. In his free time, Jorge enjoys outdoor activities and he is a soccer fan.

[View all posts](#)