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Green fiscal reform for a just energy transition in Latin America

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Green fiscal reform for a just energy transition in Latin America

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Abstract
Green fiscal reforms would contribute to climate change mitigation, increase the economic efficiency of national tax systems and provide additional public revenues. Some countries in Latin America have already taken first steps towards green fiscal reforms. This paper provides an overview of the major challenges for the successful implementation of such reforms and discusses how they could be overcome. The authors first discuss the role of country-specific economic and political enabling conditions that need to be in place for successful implementation for green successful reforms. Second, they emphasize the importance of comprehensive reform plans that include all relevant ministries and agencies and are well-aligned with other policy objectives, such as energy security and industrial development. Third, they highlight how appropriate sequencing and gradualism could lower implementation costs and hence increase the political feasibility of green fiscal reforms. Finally, the authors analyze the potential impacts of green fiscal reforms on the distribution of income and discuss transfer schemes that could avoid adverse outcomes for the poorest parts of the population. They use these four dimensions to illustrate why recent reform efforts in selected Latin American countries have been successful or have failed, respectively.

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Keywords Green fiscal reform, energy subsidies, Latin America, Multi-objective Climate Policy, Sequencing, Distribution

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1 Background

Putting a price on greenhouse gas (GHG) emissions can help reduce environmental damage linked to both local pollution and global warming (Bak et al. 2017). However, most countries in Latin America either have no such price or negative prices in the form of fossil fuel subsidies[1] (World Bank, Ecofys, and Vivid Economics 2017). This actively supports the use of fossil fuels, particularly for large oil producers (Di Bella et al. 2015). Green fiscal reforms that reduce subsidies for fossil fuels and introduce positive prices on emissions would not only contribute to climate change mitigation, but could also increase the economic efficiency of national tax systems and provide additional public revenues that could be employed to advance human development (Edenhofer et al. 2015).

Energy and climate policy is deeply embedded within a broad range of policy targets. For instance, many Latin American economies are dependent on extractive industries for exports and fiscal revenues and display high levels of economic inequality. Climate change mitigation can only be successful if it is part of a 'just transition' that fosters human well-being. For instance, Franks et al. (2018) emphasize the potential to cover financial needs to achieve the Sustainable Development Goals (SDG) in different countries if all subsidies on fossil fuels were redirected accordingly. In some Latin America and Caribbean countries (LAC) countries, a fossil fuel subsidy reform could cover a large part of the required finance to achieve the SDG goals, for instance, 60% in Bolivia, and 45% in El Salvador.

In 2013, when oil prices were relatively high, energy subsidies (including fuels and electricity) in LAC amounted to $86 billion USD, which represented about 2% of GDP. In 2015, following the decline in oil prices, subsidies in LAC fell to about $45 billion USD (Jewell et al. 2018). According to Jewell et al. (2018), under a high oil prices scenario, by 2030 LAC subsidies would grow to between $70 and $140 billion USD, and to $40 to $100 billion under a low oil prices scenario. The authors estimate that in LAC subsidy removal would lead to emission reductions of up to 5% below the base line scenario, comparable to the so-called 'conditional' NDCs[2] (that is, commitments dependent on international action).

Subsidies are larger in energy rich countries and in those that rank lower on measures of institutional and policy quality, such as budget transparency, rule of law, competitiveness or the ease of doing business (Di Bella et al. 2015). Among LAC oil producer countries that ranked lower in measures of institutional quality are Argentina, Belize, Bolivia, Ecuador, Suriname, and Venezuela (Di Bella et al. 2015). In these countries subsidies are seen as a way of sharing resource wealth with the public, despite their benefits accruing mostly to richer households.

[1] We follow the International Energy Agency (IEA) and the Organisation for Economic Co-operation and Development (OECD) definition of fossil fuel subsidies as government support of the consumption or production of oil, gas or coal that lowers their prices below market prices. This definition excludes un-priced environmental and social externalities, such as air pollution and related health effects, which are included in some other estimations, as for example in Coady et al. (2017).

[2] National Determined Contributions, submitted by countries to the UNFCCC within the framework of the Paris Agreement.

Energy subsidies contributed to fiscal deficits, and their costs were comparable to that of education and health combined. In these countries, energy subsidies significantly constrained fiscal space and were in most cases not targeted to the poorest and most vulnerable. Energy subsidies were at times financed off budget via losses at state-owned enterprises, hampering transparency, increasing uncertainty, constraining energy sector investment and reducing economic efficiency.

On the other hand, some countries in the region have begun to implement deeper fiscal reforms to tax CO_2 emissions, along with new international trends to put a price on carbon. In some cases, downstream taxes have been promoted aimed at taxing subjects that cause emissions with the consumption of fossil fuels (Chile). Other countries have maintained the structure of upstream taxes or taxes at the producer level (Colombia), but have contemplated innovative payment options that allow linking the carbon tax with carbon markets and cap and trade schemes (Mexico).

At the same time, efforts have also been made to strengthen the development of a regional carbon market. In June 2017, member countries of the Pacific Alliance committed to intensify their efforts in the measurement, reporting and verification of CO_2 emissions to identify possible voluntary market mechanisms among countries in the region.[3] Besides, in December the same year, several countries and subnational governments in the region signed the Paris Declaration on the Price of Carbon in the Americas, which includes commitments to implement national carbon pricing policies, including the promotion of a market.[4]

These reforms and initiatives are recent, so it is not yet possible to have an accurate diagnosis of their effectiveness, but the projections and preliminary results are encouraging. For this reason, the next section considers how the key challenges for successful implementation of green fiscal reforms could be addressed.

2 Key challenges for green fiscal reform

After the adoption of the Paris Agreement, practically all countries in Latin America submitted their Nationally Determined Contributions (NDCs) that specified their intended climate targets. Green fiscal reform would be a step to move from ambition to partial implementation of these targets. Even though there are some general insights applicable to all countries (Rentschler and Bazilian 2017; Withana 2016), the specific national situation will determine the details of policy design and implementation. The following sub-sections review the evidence provided by the academic literature and compiles expert knowledge on selected countries to shed some light on possibilities for, and limitations to, green fiscal reform.

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[3] https://alianzapacifico.net/?wpdmdl=9850

[4] The countries that signed this declaration were: Chile, Colombia, Mexico, Costa Rica, Canada and the states of California, Washington, Alberta, British Columbia, Nova Scotia, Ontario and Quebec.: http://www.ieta.org/resources/News/Press_Releases/2017/Declaration%20on%20Carbon%20Pricing_FINAL.pdf

2.1 Identifying favorable political conditions for green fiscal reforms

A first step is to develop an understanding of the required enabling conditions for green fiscal reform. Variables such as the overall state of the economy, internal political stability, and public debt can be expected to play important roles (Karapin 2016). Developments on the international level, such as progress in international climate negotiations or introduction of green policies in other countries, may boost domestic support for green fiscal reforms. Likewise, newly appointed heads of state may have the clout necessary to successfully foster such reforms, especially when there is sufficient backing by the general population. Furthermore, trust in government effectiveness and the expectation that associated revenues would be used in beneficial ways have been found to be important factors for the successful introduction of green fiscal reforms (Drews and van den Bergh 2016; Klenert et al. 2018).

In Ecuador, the last decade saw favorable political conditions for fostering a green reform. Former President Rafael Correa was relatively popular, the oil price was very high between 2011 and 2013 (over US$ 95 per barrel) (BCE 2017c) and there was a large investment in hydro power plants (MEER 2017). Nevertheless, green fiscal reform was never introduced as the authorities were afraid of how citizens, especially poor people, would react.

2.2 Developing comprehensive reform plans

Energy and climate-related policies do not exclusively affect environmental issues; they also impact areas such as transport, industry, agriculture, finance, trade and social inclusion (Fuso Nerini et al. 2018). Policy-makers can build on synergies to ensure a just transition and increase support for reform (Vogt-Schilb and Hallegatte 2017). Policy areas of potential synergies include energy security (reduced reliance on fossil fuel imports), local environmental benefits and the potential to diversify the economy. On the other hand, trade-offs may arise in terms of economic competitiveness due to higher energy prices and adverse effects of renewable energy use on land-use, food production, and biodiversity (Tanaka 2011).

In addition, green fiscal reforms should consider the characteristics of different sources of CO2 emissions. For Latin American countries, a high share of emissions stems from land use, land use change and forestry (LULUCF), namely 42% of total emissions (CEPAL 2017).This level indicates how green fiscal reforms also require fiscal mechanisms to reduce deforestation, e.g. by channeling some of the revenues of fossil fuel subsidy reform or carbon pricing to results-based payments for forest protection.

The multi-objective nature of energy and climate policies needs to be reflected in comprehensive strategies that ensure consistency of climate targets with other policies. Such strategies will need to include all relevant ministries and encourage coordination between national and subnational public entities. Green reforms should particularly consider important Latin American challenges such as informality, inequality, unemployment, air quality, or lack of national industries to provide capital inputs for renewable energy projects.

For instance, Argentina has recurrently aimed to reduce trade and fiscal imbalances, unemployment, poverty, and inflation while keeping external debt in check. Despite paucity in achieving those goals, an integrated green fiscal reform could accelerate investment in innovative technologies that not only reduce environmental impacts, but may also enhance competitiveness, job creation, poverty alleviation and reduce economic inequality.

In Peru, the main environmental problems are closely linked to social and energy problems, such as a lack of access to electricity and sanitation in rural areas. By replicating the successful international experiences, a green tax reform in Peru could finance payment schemes for environmental services to compensate indigenous communities and guarantee the sustainable use of forests (Trinidad and Vargas 2017). This requires coordination between various public sector agencies, such as the Ministries of Economy and Finance, Environment, Energy, Social Inclusion and Agriculture.

2.3 Sequencing of reforms and gradualism

In most situations, fiscal reforms cannot be introduced instantly; they normally require a preparatory phase that lowers the costs of reform, addresses barriers due to market imperfections and policy inconsistency, and ensures its legitimacy by reducing social cost of phasing out subsidies, thus reducing political resistance. For instance, fiscal incentives for renewable energy sources would create groups that would directly benefit from (and which can hence be expected to lend political support to) green policies (Meckling et al. 2015). Green fiscal reforms can also be introduced after building administrative capacity to effectively enforce the policies (e.g. by monitoring fossil fuel sales and tax payments).

In many countries price increases for LPG and diesel are politically contentious as these fuels are important for low-income households, either directly, in the case of LPG, or indirectly through public or goods transportation. On the other hand, gasoline prices can be less contentious in terms of aggravating poverty, on countries where they are predominantly consumed by richer households and are not used to produce basic goods. Suddenly raising prices for all fossil energy carriers to their desired level could cause substantial economic problems as firms and consumers require time to adjust (IMF 2013).

In 2017, Argentina introduced a tax (of approximately US$ 10 per ton of CO2) on the carbon content of gasoline, gas oil, fuel oil, coal and other liquid and solid fossil fuels,. The carbon tax has been designed to have no initial impact on the final prices of fuels as it partially replaces an existing tax on fuels. The intention has been to start preparing the ground and create consciousness among producers and consumers. As it is known, due to existing infrastructure limitations, the lack of technological alternatives at affordable prices, and the contentious tariff reform in place, the carbon tax will not, by itself, generate enough incentives for decarbonization in the scale and timeframe required. This shift will only be achieved if Argentina's carbon pricing policies are accompanied by adequate energy, infrastructure, industrial, technological and communications policies and, above all, if the macroeconomic

situation is structurally stabilized (Gutman 2018), in particular including an equitable fossil fuel subsidy reform.

Peru already applies taxes to gasoline and diesel based on the health impacts of its particulate matter and nitrous oxide emissions. Adding GHG emissions to this index would be a straightforward way to align the price of transport fuels with their true social costs (Jakob 2018). Likewise, in cost-benefit analyses of public investment, Peru incorporates an accounting price of about US$ 7 per tCO2. These accounting costs of carbon could be raised gradually in line with increasingly ambitious national (as well as international) climate targets (Jakob 2018).

2.4 Understanding distribution and compensation

Phasing out inefficient fossil fuel subsidies has been a long-standing issue in the G20 negotiations. While the G7 has suggested that all countries should phase out subsidies by 2025, the G20 has not yet agreed on a date. The resistance partly stems from the fear that poor households would suffer from the phasing out of subsidies. In Latin America, a recent Inter-American Development Bank study suggests that, with energy subsidies, it costs governments US$12 to transfer US$1 of income to households in the poorest quintile. Gasoline and diesel are the most inefficient subsidies, costing US$14 per dollar benefit. The most pro-poor fuels are gas or LPG, but they still costing about US$9 on average per dollar distributed to poor households (Feng et al. 2018).

Different schemes can protect low-income households from the impacts of higher energy prices. These include direct cash transfers, in-kind transfers and the provision of health, education, social security, or public infrastructure, including public transportation, see Box 1). A further

Box 1: Overview of compensation mechanisms

Increases in energy prices are likely to negatively affect the poorest social groups. Compensatory mechanisms that have been used in some countries in Latin America include:

Vouchers: When LPG subsidies were removed in 2002, Brazil introduced LPG vouchers for households that were recipients of the Bolsa Família social assistance program. The government later introduced a conditional cash transfer program to obviate the need for general LPG subsidies (Kojima 2013; Komives et al. 2008).

Cash transfers: The Vale Gás program in Brazil was established in 2001,and is still in operation. It assists consumption of gas by poor households by subsidizing bottle purchase and direct payment was made to registered families. Registration is combined with Bolsa Família.

Reliance on general social protection programs: In Mexico, LPG prices have been gradually increased (Toft, Beaton, and Lontoh 2016). These reforms employed transfer mechanisms within existing social welfare mechanisms (Oportunidades) to mitigate the effects of higher prices.

Social expenditure: In Colombia, the income from the national carbon tax finances activities related to peace building, sustainable rural development and conservation, and environmental sustainability.

option are targeted tax reductions, such as indirect or regressive taxes and taxes on wages, but only in countries where the poorest households do indeed pay a substantial amount of taxes. In addition, numerous countries use block-pricing schemes for electricity, which allow low-income households to consume a specified amount of electricity at a reduced rate.

In principle, a small fraction of savings from subsidy removal is sufficient to compensate poor and vulnerable households, since poorer households benefit less than others from fossil fuel subsidies. For instance, in Ecuador the poorest 40% of the population only receive 20% of every dollar spent on subsidies for diesel and gasoline, whereas the other 80% accrue to the richest 60% of the population (Table 1). By contrast, redirecting revenues freed up by subsidy reform to spending on social security could raise the net income of the poorest 20% of the population by around 5% (Schaffitzel et al. in prep.)

Table 1: Fraction of government proceeds from subsidy removal or energy taxation on different types of fuels needed to compensate poor and vulnerable households in 11 LAC countries (i.e. households in the bottom 40% of the income distribution)

	Diesel and gasoline	Electricity	Natural gas and LPG
Argentina	21.9%	27.4%	27.2%
Bahamas	27%	29.6%	
Barbados	14.1%	20.5%	
Chile	21.4%	27.3%	27.6%
Costa Rica	15.7%	26.7%	33.9%
Ecuador	20%	24.2%	33.6%
Guatemala	14.7%	18.7%	10.6%
Jamaica	19.1%	21.4%	23.2%
Nicaragua	17.5%	21.4%	20.7%
Paraguay	20.6%	21.4%	25.4%
Uruguay	15.1%	21.2%	28.1%

Source: (Feng et al. 2018).

3 Conclusions

This short article has highlighted several issues that are crucial for the successful introduction and implementation of green fiscal reforms in the context of Latin American countries. The country-specific context needs to be considered to overcome political challenges. For instance, political conditions favorable for green fiscal reform may vary substantially between countries with different socio-economic conditions and political cultures. Likewise, the entities required to develop the comprehensive reform plans will crucially depend on the division of power between different ministries, and the proper sequencing of reform will be influenced by

previous experience with certain policies and constrained by institutional and administrative capacities. Finally, the compensation schemes can only be implemented to the extent to which they are politically and technically feasible, i.e. not restricted by public resistance or difficulties to target recipients.

Stakeholder consultations can be an appropriate means to take into account all possible intricacies of green fiscal reforms. Such consultations would also ensure that all relevant social groups are represented in the decision-making process and that appropriate measures are adopted to alleviate excessive adverse impacts on any single group. In particular, green fiscal reforms need to include consultation processes to guarantee that traditional rights of the indigenous peoples living in most Latin American countries are not violated. Such consultations should not only occur prior to the introduction of a reform, but its impacts and the position of key stakeholder to the reform should be continuously monitored.

In addition, the international community could play a key role in supporting green fiscal reforms. For instance, the G20 could host processes that allow the exchange of experiences to better understand the relationship between policies, their effects and their contexts. Regional development banks can play a very useful role in supporting the access of Latin American countries to international climate finance. Such international climate finance could not only be used for project finance, but could also cover the macro-economic costs of green fiscal reforms, e.g. by means of results-based payments that are tied to the introduction of a price on emissions (Steckel et al. 2017) or de-risking of clean energy and energy efficiency investments (Steckel and Jakob 2018).

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