



THE HEALTH CASE FOR FOSSIL FUEL TAXES

Using Fiscal Policy to Tackle the Health Impacts of Air
Pollution and Climate Change

A POLICY BRIEF

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FOSSIL FUEL USE DRIVES AIR POLLUTION AND CLIMATE CHANGE, BOTH OF WHICH HAVE SERIOUS HEALTH CONSEQUENCES.

Air pollution is the fourth largest contributor to global deaths and has been associated with various adverse health outcomes including cancer, cardiovascular, and respiratory diseases. Air pollution is the “...contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere.”¹ The combustion of fossil fuels - such as coal, petroleum, natural gas, and heavy oils - to produce energy is the main source of indoor and outdoor air pollution globally.² The burning process emits greenhouse gases like carbon dioxide (CO₂) and nitrous oxide (NO₂) and particulate matter (PM), all of which are associated with serious health consequences including ischemic heart disease, stroke, lower respiratory infections, chronic obstructive pulmonary disease, cancers of the respiratory disease, and asthma.^{2,3}

Climate change is a health emergency. Climate change impacts the fundamental determinants of health such as clean air, safe drinking water, food systems and infrastructure. It is associated with other catastrophic health impacts spanning infectious diseases, non-communicable diseases, food security, labour, and environmental health.⁴ The combustion of fossil fuels drives climate change through greenhouse gas emissions, which in turn leads to worse air quality as a result of longer hotter summers, wildfires, drought, which raise ozone and ambient PM levels.

FISCAL POLICIES REPRESENT POWERFUL INSTRUMENTS TO ADDRESS THE IMPACT OF FOSSIL FUELS. ENDING FOSSIL FUEL SUBSIDIES AND IMPLEMENTING FOSSIL FUEL TAXES CURB FOSSIL FUEL CONSUMPTION AND PRODUCTION.

Subsidies refer to governmental fiscal measures which confer a benefit on recipients compared to other market participants (WTO, 2006). Fossil fuel subsidies are government actions that lower the price paid by consumers, reduce the cost of energy production, or raise the price received by energy producers.^{5,6} Common examples of government subsidies for fossil fuels include monetary transfers to reduce the final price of fossil fuels, tax code provisions that reduce the tax burden for producers and consumers of fossil fuels, public procurement of fossil-fuel related goods and services, and purchase regulation for non-government entities.^{5,7} Subsidies are incredibly common, and have led to a distortion of fossil fuel price and socially inefficient levels of consumption.⁸

Fossil fuel subsidies can be thought of as pre-tax subsidies or post-tax subsidies. Pre-tax subsidies reflect the difference between the consumer amount paid for fossil fuel usage and the corresponding cost of supplying the fuel. Post-tax subsidies reflect the difference between



actual consumer price and the full cost to society: “how much consumers would pay if prices fully reflected supply costs plus the taxes needed to reflect environmental costs and revenue requirements;”^{8,9} In other words, the costs of internalizing the externalities associated with fossil fuel combustion. **In 2017, it was projected that fossil fuels were supported by \$5.2 trillion of such subsidies, equal to 6.5% of global GDP.**¹⁰ These subsidies tend to reflect domestic underpricing, so it has been argued that subsidy or energy pricing reform is in countries’ own interest.⁸

In addition to stopping the subsidization of fossil fuels, applying fiscal instruments may further discourage fossil fuel consumption and production, primarily through raising the price of these goods. Taxes are a commonly used instrument. A value-added tax (VAT) levied on the price of a good or service is often used. Unlike VAT, excise taxes are levied at the point of production or importation. Excise taxes often make up a majority of the final market price, and can be designed based on the expected environmental damage that each type of fuel will cause. A second type of instrument is carbon pricing.¹¹ Taxing the amount of CO₂ emitted (a price on carbon) in theory allows the market to determine the quantity of CO₂ emitting goods and services that are produced or consumed. CO₂ emission quotas, emissions trading systems or cap-and-trade systems, limit the maximum production of CO₂ and thus allow the market to set a unit price on CO₂ emissions.¹²

THE IMPACT OF FOSSIL FUEL POLICIES ON HEALTH IS ONLY JUST BEING RECOGNIZED.

Reducing the consumption and production of fossil fuels would directly reduce air pollution and improve health. It has been estimated that over 50% of deaths due to air pollution could be avoided by removing fossil fuel subsidies worldwide.⁵ A suite of clean energy policies that achieve net-zero emissions by 2050 has been estimated to save over 45,000 lives, prevent 1.3 million asthma attacks, reduce hospital admissions and almost 4.5 million lost workdays annually in the United States alone.¹³ Further, environmental policies may curb the activities of the fossil fuel industry itself, which have been linked to air and water pollution and unfairly impact poorer communities and communities of colour.¹⁴

Taxes have been successfully implemented on health-harming products, such as tobacco, alcohol, and sugar-sweetened beverages, resulting in impressive health and economic dividends.¹⁵ Health taxes reduce the consumption of a particular good by raising its price. These policies have been used to promote healthier behaviours and enhance public health and welfare by accounting for the full cost of harmful consumption of particular goods, including the externalities (i.e. the costs borne by society) associated with the use of the specific good. Health taxes result in healthier people, a healthier and more productive population, and raise revenue for governments.¹⁵ Taxes on alcohol, tobacco, and SSBs are some of the most effective



and cost effective ‘best buy’ measures to tackle non-communicable diseases and improve public health.^{15,16}

THERE IS AN OPPORTUNITY TO REFRAME FOSSIL FUEL POLICY AS A HEALTH INITIATIVE, THAT SIMULTANEOUSLY COMBATS THE NEGATIVE HEALTH IMPACTS OF AIR POLLUTION AND CLIMATE CHANGE.

Fiscal policies have previously been used to address the environmental impact of fossil fuels, but to date have not been framed in terms of their health impact. Fiscal instruments that target fossil fuel consumption are unique policy tools that can be implemented to improve public health. However, most interventions aimed at reducing fossil fuel combustion emphasize the environmental benefits while largely neglecting the public health benefits. Lessons from both health and environmental policy arenas may be harnessed to support fiscal policies for fossil fuels.

Utilizing a health tax approach also restructures the discussion around public expenditure. There is some reluctance among some governments to implement strong health measures, as there is a misperception that health and the economy are two mutually exclusive objectives that cannot be simultaneously prioritized. As society shifts away from a fossil fuel-centered economy, both the economic and health benefits become clear. A shift towards a green economy would create more jobs, improve life expectancy and increase healthy life years. People in good health can work better and longer, save and invest, and consume longer, and therefore contribute more to economic activities.

A health tax approach also enables governments to account for all costs associated with fossil fuel consumption and production, with health impacts of fossil fuel use at the centre. For example, whilst G20 governments paid 444 billion USD in subsidies to fossil fuel companies in 2014, this led to an estimated health cost of 2.76 trillion USD.¹⁷ Thus, the real price tag is much higher: society pays once to support the fossil fuel industry and twice – and much greater – for the health and economic externalities.⁵ Reframing environmental fiscal measures as health reforms allows for economic costs to be measured directly against the health savings (e.g. hospitalizations and deaths).

FISCAL REFORMS ARE NOT WITHOUT SUBSTANTIAL CHALLENGES, INCLUDING POWERFUL INDUSTRY AND SOCIAL OPPOSITION.

The fossil fuel industry is enormous and has proven to be a formidable opponent of reform, particularly to public sector initiatives.^{14,18} Beyond providing the majority (80%) of the world’s primary energy, fossil fuels prop up the political economy of a number of nation states, and



are linked to trillions of dollars of infrastructure assets globally.¹⁹ Fossil fuel reserves (coal, oil and gas) are valued by the World Bank at \$39 trillion.^{19,20} In addition, there are estimated to be \$32 trillion of fixed assets (supply and demand infrastructure – including electricity, transport and heavy industries), a quarter of the global stock market (global equity valued at \$18 trillion), half the global corporate traded bond market (\$8 trillion), and up to four times as much unlisted debt linked to the fossil fuel system.¹⁹

When shaping fiscal policy for health and the environment, the political economy of any reform must be carefully considered. Beyond the fossil fuel industry itself, fossil fuels comprise an important part of numerous other industries and are embedded in economic activity and daily life. Efforts to reduce subsidies or increase taxes may be passed by the fossil fuel producers to the consumers. Whilst the public may find this unpalatable, highlighting the health benefits of a fossil fuel tax may offset this. Centering the health benefits of a fossil fuel tax helps to emphasize personal benefits, thereby increasing compliance and making the instrument more effective.

SUCCESSFUL IMPLEMENTATION REQUIRES A MULTISECTORAL APPROACH.

Ultimately, any attempt to implement fiscal policies addressing fossil fuels must consider its political and social dimensions, and build a wide base of cross-sectoral and public support.

Unlike tobacco, alcohol and sugar-sweetened beverages, fossil fuels are not solely a consumption good; they are an input into the production of other important goods and support essential economic activities. Fossil fuels are used in transportation industries, in the generation of electricity, across numerous residential and commercial activities, and even in the extraction and production of more fossil-fuels. The subsidization or taxation of fossil fuels thus has clear political and social dimensions spanning multiple sectors of the economy.

Implementing fiscal environmental measures as a health policy requires a multisectoral approach. Within a country, this would mean collaboration across multiple sectors such as health, energy, and transportation. Ample evidence suggests that policies that properly address all sectors linked to fossil fuel use are effective and are critical for the success of the reform process.



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