Book Reviews

Edited by Robert Herren

The Economics and Political Economy of Energy Subsidies. JON STRAND (Ed). Cambridge, MA: The MIT Press, 2015. Pp. vii, 281. $32.00

Each chapter in this edited volume is a research paper that addresses a question related to the subsidization of energy, particularly fossil fuels. As the introduction of the book points out, fossil fuels subsidies take two forms. "Before tax" subsidies are given to consumers in order to lower energy prices, and to producers to lower extraction costs and hence prices. "After tax" subsidies are subsidies involving negative externalities. Before tax subsidies are relatively uncommon in developed countries but are a common public policy instrument for developing countries.

Chapter 2 points out that the discrepancy between the price of energy and its supply cost is most pronounced in developing countries, compared to developed countries. However, undercharging for environmental costs is a bigger overall problem than undercharging for supply costs. This chapter provides estimates on what the socially efficient taxes for various fossil fuel sources would be and compares them to the current taxes and subsidies in various countries. Petroleum receives the lion's share of before tax subsidies, receiving half of the world's $450 billion pre-tax energy subsidies. The largest energy subsidies come from Middle Eastern, North African, and Pakistan countries who collectively are responsible for providing half of the world's pre-tax energy subsidies.

Post-tax, the largest energy subsidies come from Asian countries in the form of underpricing fossil fuels relative to their environmental cost, making up half of these subsidies. Developed nations are responsible for 23 percent of these subsidies, compared to only four percent of the pre-tax subsidies. Thus, underpricing fossil fuels relative to environmental costs is a larger problem for developed nations than directly subsidizing prices or extraction costs. The chapter concludes by presenting estimates on what tax rates would have to be in various countries to fully correct

for the negative externalities imposed by fossil fuels. In almost all of the countries, the current tax rate is well below the size of the externality.

Chapter 3 continues this theme by discussing the "Taxing Energy Use" database constructed by the Organization for Economic Co-operation and Development (OECD). The database contains data on energy use, tax rates, and carbon emissions for various energy sources used by OECD countries. Though there is heterogeneity across countries, some commonalities emerge. Twenty-three percent of energy usage comes from transportation, which accounts for 27 percent of carbon emissions. Heating and process use fuels range from 20 to 54 percent of energy use across the OECD and accounts for anywhere from between 14 and 71 percent of carbon emissions. Electricity averages 38 percent of energy use for these countries and account for 27 percent of carbon emissions. Petroleum is the most common energy source, accounting for 36 percent of energy use. Natural gas, coal, and renewable sources are used in roughly equal proportion to each other. The authors of this chapter estimate the elasticity of energy usage with respect to tax rates. After correcting for country heterogeneity and fuel and resource fixed effects, the authors estimate the elasticity to be -0.115. Such a low elasticity of demand with respect to taxes casts some doubt on the feasibility of using taxes to reduce carbon emissions, as the tax rates in these countries would have to be much higher than current tax rates. This is consistent with what was found in chapter 2.

With it established that subsidies are a problem, the book moves on to discussing why this problem persists. Chapters 4 and 5 construct theoretical political economy models that produce energy subsidies as an equilibrium result. Chapters 6 and 7 provide some empirical estimates in support of these models. The pre-tax subsidies are the focus of these chapters. The book does not further address post-tax subsidies, beyond chapters 2 and 3.

Because pre-tax subsidies represent bad public policy, it is no surprise that the political economy models focus on failures of governance. Chapter 4 focuses on the time inconsistency problem that a politician faces. A politician can announce a cut to energy subsidies today, but has incentive to reverse this cut in the future for political reasons. If voters expect this to happen, they will not invest in costly energy saving technology today.

Chapter 5 focuses on the short-sighted bias that politicians have, as politicians need political support today while a cut in energy subsidies

results in benefit over the long-term. If politicians care about long-term political support, they build this support by investing in transportation infrastructure and public goods, investment that is consistent with long-run economic growth. If politicians are instead looking for short-term political support, they invest in energy subsidies as subsidies provide an immediate, visible benefit to their constituency. Politicians who are corrupt, have little concern for budgetary balance, or have to face election in a country where car ownership is prevalent also increase the amount of subsidies given in equilibrium.

The empirical study in chapter 7 finds an inverse relationship between the quality of a country's governance and energy subsidies, as expected from the theoretical models. Countries with better governance, ceteris paribus, tend to have higher fuel prices, suggesting less subsidies are given. Diesel and gasoline prices respond the most strongly to governance, suggesting that politicians subsidize these fuels to appeal to politically connected interest groups. Kerosene, which is used by poor people for heating and cooking, only responds weakly to governance, suggesting that the poor have little political clout to influence subsidies.

If energy subsidies are caused by poor governance, improving a country's governance is the natural solution. Because this is a herculean task, the book touches on other solutions that are more feasible but more problematic. Automatic energy pricing formulas, which phase-out subsidies, or delegating energy pricing to a committee can always be overturned by a politician for political reasons. One possibility is to replace energy subsidies with direct cash subsidies to households. Such a policy seems to have been relatively successful in Iran, as discussed in chapter 8 and is looked-upon favorably by citizens of Gulf countries in surveys discussed in chapter 9.

This book provides a good overview about the economics of fossil fuel subsidies from a theoretical and an empirical standpoint and could lead to further research in a number of directions. The political economy of post-tax subsidies in the developed world is not modeled from a theoretical or empirical standpoint. The empirical relationship between fuel subsidies and governance in chapter 7 is only applied to sub-Saharan African countries and thus could be modeled more generally, if data is available.

Subsidies to renewable energy are only briefly covered in the last chapter of the book with the finding that these subsidies should be given to upstream producers in the supply chain (e.g. the producers of

renewable energy sources) rather than downstream in the supply chain (e.g. electricity companies that use these sources to generate electricity). The reason is that downstream subsidies increase the demand for renewable energy sources, which increases the price of them. This causes lower income countries to switch to comparatively cheaper nonrenewable sources, which offsets the savings in carbon emissions. In contrast, subsidizing the production of renewable energy sources results in a lower price for these sources, which makes lower income countries more likely to adopt them. The economics and political economy of renewable energy sources could be further investigated as well.

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The Downsizing of Economics Professors: How It Will Happen, and Why It Will Succeed. PAYSON, STEVEN. Lanham, MD: Lexington Books, 2017. Pp. 182. $90.00.

Purdue University, a traditional mid-sized public university in Indiana, in 2017 acquired the large online and for-profit Kaplan University to create a new university named Purdue University Global. Many in academia viewed the merger negatively because they feared that changes will be made to the traditional university. Many in the business and public policy communities viewed the merger skeptically because they are accustomed to change being slow or non-existent in higher education. The Chancellor of Purdue University, Mitch Daniels, has been a controversial figure given his efforts to graduate students in three rather than four years and for efforts to use Kaplan's technology to expand the use of distance education. Daniels himself remarked "In a sector that so slow to change, or even recognize the threats it's facing, you don't have to move very far to be seen as different.[1*]" The slowness of change in the structure and processes in the academy is only one reason why higher education is so costly. The other reason why higher education is costly is that economists often refrain from participating in many restructuring

[1]Ratnesar, Romesh (2017, December 25). "Intro to Mitchonomics." *Bloomberg Businessweek*, 4552, 66-71.