Taxing Carbon in Developing Countries

Anna Pegels

The issue

Today’s development policy faces two interdependent challenges: poverty reduction and climate change. To meet the dual challenge of creating acceptable living conditions for billions of poor people and preserving these conditions for future generations, we must de-link economic activity from greenhouse gas emissions.

One of the most urgent requirements is the reflection of the true costs of our economic actions in market prices. The current rules of market economies allow economic agents to externalise many environmental costs. As a consequence, individuals and firms do not factor such costs into their decisions, but pass them on to society. Governments thus need to take measures to ensure these costs are reflected in market prices (“internalised”).

Carbon taxes, that is, taxes on units of emitted carbon dioxide, are among the most straightforward measures to internalise climate costs. They send a clear price signal and raise revenue. This provides the opportunity of reaping a “double dividend” of environmental protection and of using the tax revenues for social and economic benefits. Many countries nonetheless hesitate to tax carbon emissions. The political barriers that stand against environmental tax reform are often based on competitiveness concerns. Enterprises fear competitive disadvantages in international markets, which may result in job losses. These concerns need to be taken seriously, particularly when countries’ economies are based on carbon-intensive activities that are heavily exposed to international competition, such as some energy-intensive industries. Decisions on carbon tax design and implementation, and potential protective measures for individual industries, should be based on the best available evidence.

Results

Carbon pricing through taxes or cap-and-trade schemes is gaining ground in industrialised and some developing countries, but not to the extent necessary to achieve a uniform global price of carbon and avoid exceeding the limit of 2°C global warming. Where carbon pricing is implemented, for example in European countries or several Canadian and Chinese provinces, governments make use of measures to protect competitiveness, most notably reductions of – or even exemptions from – carbon pricing. However, ex post studies of competitiveness impacts on firms in industrialised countries suggest that, in many cases, these exemptions would not be necessary and could be phased out gradually.

Carbon taxes are a straightforward way to align economic incentives with environmental boundaries. However, competitiveness concerns often hinder their implementation.
have positive economic and social effects in OECD countries, their individual design features and adaptation to country backgrounds are decisive. The decision about which goods are taxed impacts on the distribution of the tax burden on different sectors, firms and population groups. Smaller firms may have different emission patterns than larger ones, and – depending on their emission sources and exposure to international trade – sectors may be positively or negatively affected. Taxing flight emissions, for example, is likely to mostly affect high-income households, whereas taxing emissions from public transport can have anti-poor effects. Modelling exercises can inform policy-makers about the expected effects of different tax design options. This information can be used to design tax schemes so that negative effects on vulnerable sectors or population groups are avoided, and to allocate revenues to create positive – and alleviate negative – effects.

Revenue use, which has been so crucial for the positive impacts of carbon taxation in industrialised countries, is likely to be central for carbon tax impacts in developing countries as well. However, revenues may need to be used differently here. In industrialised countries, they have often been used to lower labour costs (such as social security contributions) to generate positive employment impacts. In developing countries, in contrast, employment is often informal, and social security schemes are sketchy. Using carbon tax revenues to lower costs of formal labour will reduce incentives to stay in the informal sector, but it may not have a positive impact on overall employment. Other revenue use options may be more effective in creating economic synergies or compensating for potential negative distributive effects. Revenues could, for instance, finance direct transfers or cross-subsidise electricity lifeline tariffs to protect poor people from rising electricity bills as an effect of carbon pricing. Furthermore, empirical studies suggest that revenue recycling to subsidise basic goods, such as food, can have positive effects on poverty. In general, transparency on tax collection and use is key to ensure political acceptance of (carbon) taxes, particularly in countries with low levels of trust in governmental accountability.

Recommendations

Although evidence shows that carbon taxes can have positive economic and social effects in OECD countries, their individual design features and adaptation to country backgrounds are decisive. The decision about which goods are taxed impacts on the distribution of the tax burden on different sectors, firms and population groups. Smaller firms may have different emission patterns than larger ones, and – depending on their emission sources and exposure to international trade – sectors may be positively or negatively affected. Taxing flight emissions, for example, is likely to mostly affect high-income households, whereas taxing emissions from public transport can have anti-poor effects. Modelling exercises can inform policy-makers about the expected effects of different tax design options. This information can be used to design tax schemes so that negative effects on vulnerable sectors or population groups are avoided, and to allocate revenues to create positive – and alleviate negative – effects.

Revenue use, which has been so crucial for the positive impacts of carbon taxation in industrialised countries, is likely to be central for carbon tax impacts in developing countries as well. However, revenues may need to be used differently here. In industrialised countries, they have often been used to lower labour costs (such as social security contributions) to generate positive employment impacts. In developing countries, in contrast, employment is often informal, and social security schemes are sketchy. Using carbon tax revenues to lower costs of formal labour will reduce incentives to stay in the informal sector, but it may not have a positive impact on overall employment. Other revenue use options may be more effective in creating economic synergies or compensating for potential negative distributive effects. Revenues could, for instance, finance direct transfers or cross-subsidise electricity lifeline tariffs to protect poor people from rising electricity bills as an effect of carbon pricing. Furthermore, empirical studies suggest that revenue recycling to subsidise basic goods, such as food, can have positive effects on poverty. In general, transparency on tax collection and use is key to ensure political acceptance of (carbon) taxes, particularly in countries with low levels of trust in governmental accountability.