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VOTER COALITIONS AND PRO-CLIMATE REFORM

RESEARCH REPORT

Low and Middle Income Countries Research Network (LMIC)

Research Report

This research report presents a summary of the forthcoming journal article by Sayantan Ghosal (Adam Smith Business School, University of Glasgow) Anna Malova (Adam Smith Business School, University of Glasgow) and Sharun W. Mukand (Department of Economics, University of Warwick).

Given the failure of the Kyoto protocol to implement globally negotiated cuts to greenhouse gas emissions, recent developments have emphasized the role of unilateral commitments by nations in cutting greenhouse gas emissions. For example, the Paris accord, which explicitly sets out to monitor and coordinate unilateral national commitments to implement pro-climate reform. Indeed, it could be argued that the success of the Montreal accord, as against the Kyoto protocol, was precisely that it leveraged unilateral commitments effectively (Barrett 2003)

A key issue is therefore how countries can mitigate domestic political barriers to pro-climate reform, enabling a shift from an unsustainable status quo. This will be the focus of the analysis undertaken in the paper.

We analyse a simple model where underlying domestic mobility frictions create uncertainty about the ex-post identities of winners and losers when pro-climate reform is adopted. Mobility frictions is an umbrella term to describe any barriers to societal transitions. Examples can include a political regime (autocracy, despotism), institutions, rules and laws enacted in a country at any given point in time, unfair judicial system, gender and racial inequality, lack of infrastructure inhibiting physical movement of workers withing a country.

In our model, mobility frictions arise due to the unknowable outcome of a climate reform. Any reform will inevitably benefit some groups more than others. For instance, a proposed reform can negatively affect oil and gas sector while offering some benefits to those employed there, but when workers are unsure whether they will be entitled to the benefits, they will likely prefer not to support the reform. When the voters are uncertain about how they will fare under the new reform, they would prefer to adhere to the status quo.

Such uncertainty could also be due to bottlenecks in domestic capacity to adopt, simultaneously, both upstream and downstream low-carbon technologies to effectively abate emissions. An environmentally sound technology can be turned into a polluting one if the upstream technologies do not keep up with the transition. For instance, currently, only in two regions in the U.S., emissions from charging an electric vehicle at night are lower than those from driving a hybrid vehicle (Zivin et al. 2014), and only there environmental benefits from driving electric cars are positive (Holland et al. 2016, Clinton and Steinberg 2019). If the rate of adoption of electric vehicles exceeds the capacity of the electricity generation system to provide clean energy, environmental benefits may be forfeited.

Throughout the paper we assume limited transferability of payoffs: winners under the reform cannot credibly commit to compensate the losers. We show that mobility frictions together with limited transferability of payoffs imply that pro-climate reform is either implemented immediately or never implemented at all.

In the latter scenario, before reform is proposed as an option, a willing coalition of voters needs to be mobilised to mitigate the political constraints that prevent the transition to pro-climate reform (Roberts et al. 2018).

Under certain conditions, such a willing coalition of voters leads to the immediate adoption of pro-climate reform. For instance, Marechal and Lazaric (2010) note that the obstacles to wider implementation of efficient emission-reducing investments require targeting “lead users”. Such early adopters would be a specific instance of the mechanism discussed here. In general, when it comes to promoting technological transitions, especially in the field of renewable technologies, governments may want to start with creating niche markets and managing them strategically to achieve a technological regime shift. This implies a government taking on a role of a catalyst and facilitator rather than a regulator or benefactor (Kemp et al. 1998). Roberts et al.(2018) point out that in “the Danish transition to district heating, for example, the state cultivated a successful coalition of users, municipalities, and local cooperatives based on shared principles of energy security, low-cost heating, and cooperatism.”

When the pro-climate reform cannot be implemented immediately, a promise to do so in the future (with a delay of one or more periods) is credible: the winning coalition of voters serves as a commitment device as they will hold the politician’s “feet to the fire” if the promise is reneged on. In our setting, although voters’ and politician’s preferences do not change as times goes on, delaying reform may be essential for its implementation precisely because the willing coalition has incurred a non-recoverable cost and therefore are willing to vote out the incumbent politician.

As an example of such policy, the first step in the German transition to a sustainable electricity system, was an increase in government subsidised R&D expenditures, which created advocacy coalitions that would later grow to be powerful enough to influence policy choices (Jacobsson and Lauber 2006). This coalition consisited of private firms invested in wind and solar energy as well as associations and other organisations such as the German Solar Energy Industry Association and Eurosolar. The system of feed-in tariffs also created support amongst farmers and homeowners (Strunz 2014). The winning coalition, thus identified and constructed, turned out to be key in the energy system transition, although it never was an explicitly stated goal of the German government.

The model considered in the paper is a simple three-period game of reform adoption with voters split into two uneven groups, with supporters of the status quo representing the majority at the beginning. In every period, they vote whether the environmental reform should be implemented. If it is, the payoffs change and the mobility across groups is triggered, i.e., a certain number of people are randomly drawn from one group to the other. This reconstitution between groups is what may result, under certain conditions, in increased social welfare. However, even when this holds, there still may not be enough incentives for the majority to vote for the reform. We thus propose applicable mechanisms that may help engineer the reform adoption.

Motivated by the current emphasis on unilateral commitment by nations in global climate change negotiations, in this paper, we explore two mechanisms to implement pro-climate reform. Both mechanisms require a winning coalition of voters before the reform is proposed. In one case the transition is immediate, while in the other the reform is adopted with a delay. In the latter case, the winning coalition serves as a commitment device that prevents the ruler from breaking the promise of a future reform.

Although our focus has been on a pro-climate reform, our analysis has relevance for other areas of policy reform such trade or financial regulation.

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