

## **Regulatory Matters: Which Factors Matter in Regulating the Environment?**

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This paper focuses on determining the factors that influence emissions regulations in developing countries. Pollution abatement strategies have been center stage in the developed world for close to four decades. Similar concerns are fast enveloping developing economies, especially those in Asia, that are growing at a rapid pace. One option is to follow what developed countries did. To better understand the regulatory processes this study uses both the literature on diffusion and adoption of regulations. Understanding these factors could provide tools to directly or indirectly induce pollution control in these countries. Specifically, this study looks at adoption of automobile emissions regulations in four countries: China, India, South Korea, and Thailand. The traditional role that regulations play in the developed world is one drives technology. Due to a lack of internal research and development (R&D) capacities in developing countries, I expect access to technology to play a pivotal role in enabling regulatory change. Technology might have a ratcheting effect on regulations, reversing the cause and effect sequence experienced in the developed world. To study the influence of access to technology I focus on factors such as openness, trade considerations, foreign direct investment and, existing political institutions in the adoption of regulations while controlling for population demographic and income. I use data from interviews with policy-makers, auto-manufacturers and researchers at technical and policy institutes along with secondary sources to trace regulatory processes. Analyzing interview data I find regulators in these countries impose regulations that aim to 'satisfice' rather than maximize emissions control. Given the environment of uncertainties, the information that is accessible and, constrained by computational capacities, regulators work with a 'bounded rationality'. They hence adopt regulations that can be met with demonstrated technologies thereby reducing abatement costs that result from uncertainties in the invention process. Countries that are open to foreign trade, investment and collaborations, are thus able to adopt more stringent regulations than they otherwise would. Inability of the petroleum sector to provide requisite quality fuels, however, could be a stumbling block for countries wanting to adopt tighter emissions standards