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The Political Economy of GM Food Regulation in LDCs: Adoption or Rejection?

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The introduction of Genetically Modified (GM) crops has the potential to increase agricultural productivity, which could contribute substantially to global food security and poverty reduction. Herbicide-tolerant and insect-resistant traits in GM plants protect crops, reduce input costs through reduced pesticide/insecticide use, and improve crop yields, creating socioeconomic and environmental benefits. Moreover, GM crops may offer significant benefits to consumers through lower consumer food prices. Today, more than 25 countries are producing GM crops. However, many developing countries are lagging behind in the approval process or they have yet to approve the commercialization of GM food crops. We explain the factors affecting GM crop adoption or non-adoption in developing countries. We also evaluated the economic aspects of GM crops by examining the opportunity costs that are foregone due to non-adoption.

Research results indicate that international and country-specific political and economic factors are critical to GM technology adoption. The foremost

objection to GM adoption stems from concerns about its environmental and food-safety impacts. Marketing concerns also affect adoption. European Union and Japanese trade restrictions and GM regulations have affected the decision making of some developing countries, especially countries which export food products to Europe and Japan. In addition, weak scientific and institutional capacity has made the approval process sluggish in many developing countries. On the other hand, by not adopting GM technology, opportunity costs are increasing in terms of foregone benefits that society could have captured if GM technology had been adopted. For example, increases in income per hectare from Bt cotton adoption ranged from \$23 to \$470, in Argentina and China, respectively. Developing countries should devote more public expenditure into GM crop research to improve their capacity to analyze all the regulatory and environmental issues, and market requirements that encompass this new technology adoption.