

Transgenic Pest Resistant *Indica* Rice: An Ex-ante Economic Evaluation of an Adoption Impact Pathway in the Philippines and Vietnam for *Bt* Rice

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(ABSTRACT)

Research and development of *Bt* rice in Southeast Asia has been overshadowed by the contentious debate over the potential release of transgenic food crops into the region. The study provides empirical evidence on the potential size and distribution of economic benefits of adopting *Bt Indica* rice in the Philippines and Vietnam through the years 2000 to 2020. Total welfare gains from *Bt* rice are projected at 618.8 million USD (discounted at 5 percent) and aggregate benefits by region are projected at 269.6 million USD for the Philippines, 329.1 million USD for Vietnam, and 20.1 million USD for the rest of the world. Simulation results indicate that producers in both countries will capture 66.5 percent of the total welfare effect from *Bt* rice adoption, 25.9 percent will accrue to consumers, 3 percent to the rest of the world, and the loss in Philippine government revenue accounts for 4.6 percent of the total welfare effect. The study also reports how other factors will determine the size and distribution of economic benefits of *Bt* rice.

Keywords: *Bt* Rice, Biotechnology, Transgenic Pest Resistance, Adoption Impact Pathway, Economic Surplus, Southeast Asia

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