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## ACCEPTED MANUSCRIPT

### The impact of India's food security policy on domestic and international rice market

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#### **Abstract**

Food security policy making in India is at crossroads. India has emerged as a leading rice exporter. The government of India has introduced the National Food Security Act which requires 33.6 million tons of rice per year for its public food distribution system. In this study, we modeled India's rice market and analyzed policy implications of the long-term impact of India's food security act on domestic and international rice market. We developed a structural economic demand and supply model for India's rice market and further added subsidy equations to trace the consequence of National Food Security Act on domestic rice consumption and on the international market. We specifically focus on three different scenarios: subsidy as price effect, subsidy as inelastic income effect, and subsidy as elastic income effect under the broader framework of National Food Security Act. We found that at the end of the projection period (2024-25), as a result of rice subsidy program, the consumption of rice increases significantly in the case of price effect while the inelastic income effect has no or less impact on production, consumption, and export of rice. Hence, the policy implication of our study is that if the objective of the National Food Security Act is to increase consumption then it needs to be implemented as price effect.

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