

# Market development and trade as drivers of food security: The case of India

In the past, global food security issues were often perceived as the domain of the leading industrial countries, United Nations agencies and international non-governmental organisations. This global landscape is changing – newly emerging countries (in particular Brazil, China, and India) are now also contributing in a significant way to the food security agenda. These countries account for a significant proportion of the world's population and are home to a large share of the world's undernourished people. They have experienced rapid economic growth, increasing their trade with the global economy in recent years. The impacts of policies undertaken to combat poverty and hunger in these countries and to boost production and trade affect the lives of millions.



In the past, global food security issues were often perceived as the domain of the leading industrial countries, United Nations agencies and international non-governmental organisations. This global landscape is changing – newly emerging countries (in particular Brazil, China, and India) are now also contributing in a significant way to the food security agenda. These countries account for a significant proportion of the world's population and are home to a large share of the world's undernourished people. They have experienced rapid economic growth, increasing their trade with the global economy in recent years. The impacts of policies undertaken to combat poverty and hunger in these

countries and to boost production and trade affect the lives of millions.

The food and nutrition security situation in India is mixed. Although projections indicate that food grain availability is not a problem and that there is food grain security at the national level, widespread food insecurity exists at the household level. In addition to this, high food inflation and price volatility of non-cereal crops (e.g., pulses) pose a problem for the stability of food and nutrition security. Women and children, in particular, suffer malnutrition – around 40% suffer from underweight and 45% from stunting.

Researchers from Wageningen UR teamed up with partners in Europe (i.e., University of Leuven (KU Leuven), Research Centre on Animal Production (CRPA) and Leibniz Institute of Agricultural Development in Central and Eastern Europe (IAMO)) and in India (i.e., New Delhi office of the International Food Policy Research Institute (IFPRI) and the Indira Gandhi Institute of Development Research (IGIDR)) for the research project *Trade, Agricultural Policies and Structural Changes in India's Agrifood System; Implications for National and Global Markets (TAPSIM)*. The study was made possible with the support of the European Union (EU) and the research programme Global Food Security. The research aimed to determine future developments in supply, demand and trade for the main agricultural commodities and main trends in its high-valued agri-food chain. It assessed the impact of multilateral and bilateral trade policies, agricultural and rural policies, and structural changes on national and global markets.

### The role of agriculture in the Indian economy

India is a large country with over a billion people. Since its independence in 1947, the country has made considerable progress economically and has demonstrated increasing resilience to economic shocks, such as during the global food, fuel and financial crisis of 2008-2009 (Gulati et al., 2012). The agriculture sector has, however, not performed as well as other sectors in the economy. Agricultural growth remained less than the targeted rate of 4%. The main reasons for this include the slowing of irrigation expansion, near stagnation of public investment, increasing cost of agricultural subsidies (such as the National Food Security Mission), poor access to credit, fragmentation of land, marginalisation of

agricultural labour and environmental stress. Government policy also had a dampening effect on the sector, serving to discourage the private sector from engaging in a wide range of agricultural activities – from seeds to storage, and from processing to retailing.

### The importance of trade and agriculture

During much of the period from 1970 to 1990, government support to the agriculture sector fell relative to the manufacturing sector as a result of an overvalued exchange rate and high levels of protection applied to the manufacturing sector through a combination of tariff and non-tariff measures. In the wake of rising crude oil prices and dwindling foreign exchange reserves, an economic reform package was adopted to help get through the Balance of Payments crisis in June 1991. Key reforms included the devaluation of the Indian rupee, reduction in the levels of protection in the manufacturing sector and liberalisation of the agricultural trade market. As a result, foreign exchange reserves began to build up and with the gradual removal of trade restrictions and the licensing system, trade increased. The liberalisation of rice exports was one of the most significant reforms.

### Models used in the study and the effect of an India-EU FTA and a WTO agreement

The study explored India's trade policies, their implications and potential pathways for the future. To help the researchers in their assessment, two simulation models (a global and a national CGE model, Box 1) were linked and adjusted to meet the specific requirements of the project. Scenarios of an India-EU free trade agreement (FTA) were developed using various assumptions (Box 1).

#### Box 1 Simulation models and assumptions used

The models used included:

- 1 A global model: the *Modular Applied GeNeral Equilibrium Tool (MAGNET) model*. MAGNET is a computable general equilibrium (CGE) model that is widely used to analyse the external environment and policies covering the global economy, including bilateral trade relationships between all participating countries/regions
- 2 The national *CGE model* of the Indian economy was used to capture specific details of the economy, such as the production structure, domestic policies, the different types of consumers (e.g., rural and urban household types which allowed for the assessment of trade and agricultural policy impacts on poverty)

*Assumptions* used to examine the effect of an India-EU FTA included: all tariffs being abolished, except for tariffs on sensitive products; the average import tariff rate by the EU for commodities from India and vice versa was reduced from 2% to 0.1%, and from 8.4% to 0.6% respectively. The average import tariff rate by the EU for commodities from India was reduced from 2% to 0.1%, and the average import tariff rate by India for commodities from the EU was reduced from 8.4% to 0.6%



The results indicated that an FTA will lead to an increase in India's gross domestic product (GDP) of around US\$5 billion in 2015, and is set to increase further to US\$50 billion in 2030 (equivalent to 0.7% of Indian GDP). The effect of an FTA to the economy in the EU is expected to be minor. A free trade agreement will lead India to increase its imports from the EU by slightly more than 50%, with the highest increases in processed food products. Increased exports from India to the EU are expected to come mainly from the manufacturing industry.

A World Trade Organisation (WTO) agreement to liberalise globally will only result in some small benefits for India and only in short-term benefits for the EU. The rest of the world is expected to benefit the most from such an agreement. The EU will benefit more from a global agreement to liberalise trade than India, although these benefits are expected to be less than 0.1% of GDP.

There are advantages to engaging in an India-EU FTA. The results indicated that an FTA is more beneficial to Indian rural households because of the extra income gained, while a WTO agreement will be more beneficial to those living in urban areas. In terms of wages, rural unskilled labourers are expected to benefit the most under an India-EU FTA regime. On the whole, however, both FTA and WTO redistribute income from rural rich households to the poor and middle income households.

### Future outlook in trade policies

It is envisaged that food security concerns in India will remain paramount to any agricultural trade policy (Brouwer and Joshi, forthcoming). This is

true particularly with respect to the grain sector. Despite the large reserves of foreign exchange and the ability to play on world markets, India is reluctant to completely open up its grain market. This is linked to fears on the part of policy-makers that with the liberalisation of agricultural trade, the domestic market will be flooded with imports – but this has not happened so far. Further, India has pursued a policy of price stabilisation by closing its markets for wheat and rice as world market prices peak. However, to placate domestic wheat and rice producers, India has been compelled to raise minimum prices, while subsidising consumer prices. This policy served to stimulate farmers to produce more wheat and rice, which eventually resulted in the spoilage of large stocks of wheat and rice, due mainly to inadequate storage facilities.

India's agricultural sector is becoming more diversified and its share of high value commodities such as horticulture, livestock and marine products is increasing. Although the export of these high value commodities has been growing for some time, India still remains a small player on the global market. The analyses suggest that India stands to gain substantially if more attention is given to stimulating private sector involvement combined with large investments to boost infrastructure and technological innovations, particularly in the seed and the processing sector. These improvements, if realised, will help raise the level of exports, address food insecurity within the country, and lift a large segment of the population out of extreme poverty.

---

#### Contributors

Floor Brouwer *floor.brouwer@wur.nl*  
 Gerdien Meijerink

---