

EFFECTS OF INDIA'S TRADE POLICY ON RICE PRODUCTION AND EXPORTS

Nancy Clarkson,
Korbel School of International Studies,
University of Denver, 2201 South Gaylord Street,
Denver, CO 80209.

And

Kishore G. Kulkarni, Ph.D.,
Professor of Economics and Editor, Indian Journal of Economics and Business, (www.ijeb.com)
Metropolitan State College of Denver, P. O. Box 173362, Denver, CO 80217-3362.
E-mail: kulkarnk@mscd.edu

Key words: Export Policy, Rice Exports, India, Quotas

JEL Classification code: F1, F00, F31

Second author will serve as the corresponding author. Please send all written comments. Usual caveat applies and the remaining errors are blamed by authors on each other.

Abstract of **“EFFECTS OF INDIA’S TRADE POLICY ON RICE PRODUCTION AND EXPORTS**

India is a major producer and exporter of rice, a staple commodity vital to the food security and welfare of over half the world’s population. Since she consumes 95% of the rice she produces, rice prices are an integral part of national welfare to both consumers and producers. Protectionist trade policy actions in 2008 resulting from food shortage concerns potentially appeared to increase national welfare and limit the transmission of higher world prices to Indian consumers. However, India’s greater use of export restrictions vs. export tariffs and its monopoly power in the production of rice could have limited the full effect of the price decrease. Plus the trade restrictions have lowered the overall economic welfare even though consumers benefited by forcing the produces sell product strictly in the domestic market. This paper evaluates the economic effects of such trade policy in the framework of comparative static model that explains the costs and benefits of tariffs and subsidies. The paper is divided into 4 sections, after initial section of the Introduction, it investigates the theory of export subsidies in second section. Third section explains the conditions of Indian economy in terms of rice production and rice exports. Section four makes some important conclusions and carries out the summary.

EFFECTS OF INDIA'S TRADE POLICY ON RICE PRODUCTION AND EXPORTS

Section One: Introduction

A major food staple, rice is central to the food security of over half the world's population. Primarily cultivated by small farmers, it also serves as a wage commodity for cash crop or non-agricultural sector workers. This duality can lead to conflicting policy objectives, with policy makers intervening to protect farmers from price declines and consumers from price increases (Food & Agriculture Organization of the United Nations, 2003). When the price of rice doubled in the first half of 2008, consumer riots and protests in many developing countries led to increased government intervention.

Food price increases contribute to inflation and disproportionately affect the poor. Mounting concerns about food shortages prompted India's government to engage in several protectionist measures, including prohibiting exports of non-basmati rice in February 2008 (Chandrashekar, 2008) and imposing export tariffs on basmati rice in April 2008 (Oryza, 2008). Their goal was to increase domestic supplies and lower domestic prices. These actions "triggered a surge in global rice prices" (Mortished, 2008). Prior to export restrictions, India was the third largest rice exporting country, behind Thailand and Vietnam (USDA, 2008). While high global rice prices existed prior to India's actions, they did cause an acceleration of price increases. Given the decrease in world welfare caused by reactionary price increases and resulting shortages, whether India's policies increased national welfare is worthy of review.

Traditional trade models hold that free trade is the best way to maximize economic welfare. However, when the objective is to maximize national welfare, free trade is not necessarily the best

policy choice. Section Two will outline the theoretical application of the price and welfare effects to a domestic economy of export restrictions and export tariffs under a large country assumption.

Partial equilibrium analysis is used to compare consumer and producer welfare in one sector (rice).

Economic effects of export restrictions and export tariffs will be reviewed separately, as will the change in dynamics caused by monopoly pricing.

Section three will apply section two's analysis to evaluate if India's protectionist policies maximized national welfare. Local prices should decrease, which would prove beneficial for Indian consumers yet harm Indian producers, who would benefit from rising international prices. The aggregate welfare will be calculated by adding the gains and losses to consumers, producers, and recipients of government revenue. If positive, the policy has increased national welfare; if negative, it has decreased national welfare. Given India's monopoly power of rice, it is expected trade policies will improve national welfare.

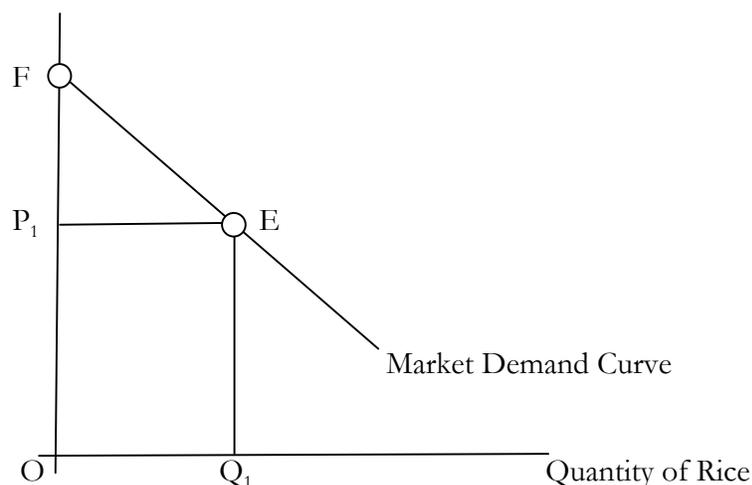
Section Two: Theoretical Trade Policy

Overview

This section evaluates the price and welfare effects of export restrictions and export tariffs on a domestic economy. Partial equilibrium is used to compare consumer and producer welfare. Assumptions include: a two country model, a homogenous good that is perfectly substitutable, perfectly competitive markets, and free trade between the two countries. A large country model is used since India's share of rice exports is significant in the world market and world price increases were attributed to her actions. India will be designated as the domestic economy; the rest of the world (ROW), the foreign economy; and rice, the good. When referring to export restrictions, non-basmati rice is assumed to be the exported good; and when export tariffs have to be analyzed, basmati rice is assumed to be the good in question.

Two definitions are necessary prior to the evaluation of trade policy: consumer welfare and producer welfare. Consumer welfare is measured by consumer surplus and is defined as the satisfaction consumers achieve by paying less for the market price of a good than they would have been willing to pay. Figure 1 denotes how consumer surplus is calculated.

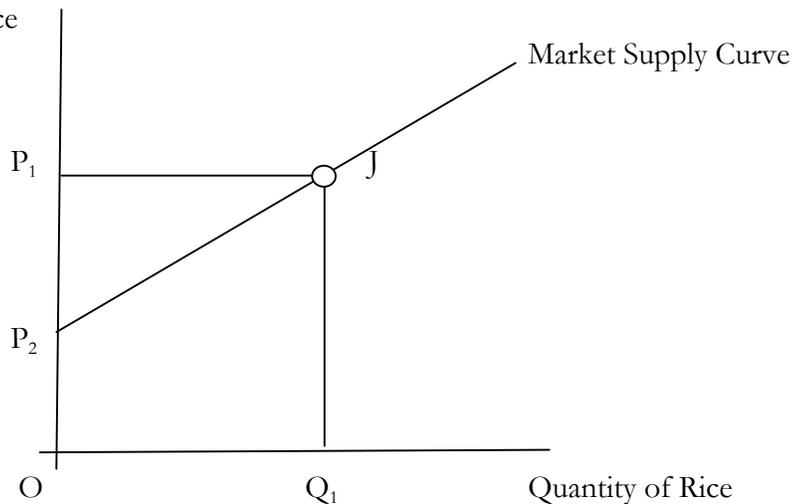
Figure 1:
Price of Rice



Point OF represents the maximum price that the first consumer would have paid for rice. At point E, consumers would pay the market price OP_1 at quantity OQ_1 . All consumers who would have paid a higher price than OP_1 below the demand curve up to point OF have consumer surplus. The area of triangle FP_1E measures consumer surplus.

Producer welfare is measured by producer's surplus and is defined as the satisfaction producers receive for having the market price of the good higher than the minimum price they would have accepted for the good. Figure 2 denotes how producer surplus is calculated.

Figure 2:
Price of Rice



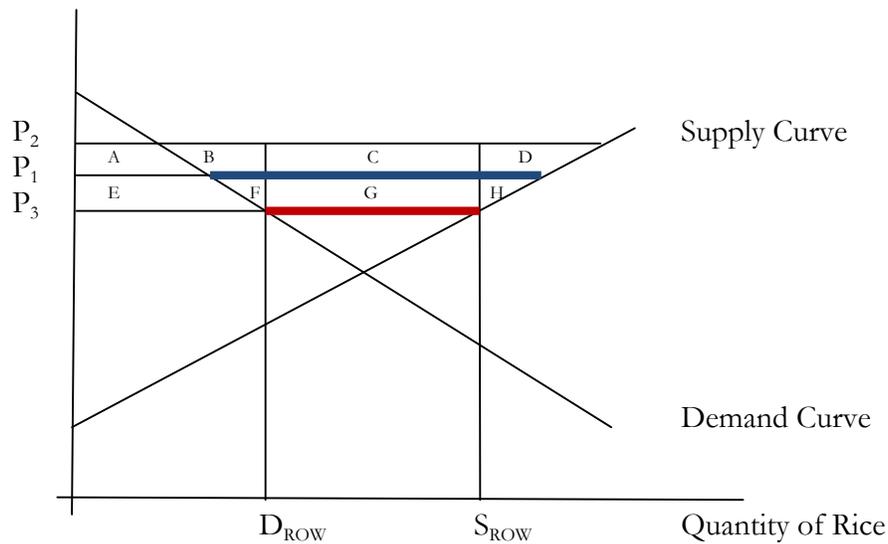
Point P_2 represents the minimum price producers would have accepted for rice. Point P_1 represents the market price of rice. At point J , producers would supply quantity OQ_1 at the market price OP_1 . All producers who would have been willing to accept a price below OP_1 have producer surplus. The area of triangle P_1P_2J measures producer surplus (Kulkarni, 2009).

Export Restrictions

The imposition of export restrictions will restrict the flow of a good from the exporting country, India, to ROW. Since India is a large exporter, the world's supply of rice would decline, causing excess demand for rice in the market. This excess ROW demand will cause an increase in the ROW price of rice, since assumptions indicate rice is homogenous and the market is perfectly

competitive. As markets adjust, this higher ROW price reduces ROW demand, which increases domestic supply as exports slow. This excess domestic supply will lower domestic prices to their original autarky price, since rice exports are prohibited entirely, which will eventually lower domestic supply while reducing India's export supply to zero (Suranovic, 2007). These effects are demonstrated in Figure 3.

Figure 3:
Price of Rice



P_1 is the world price prior to India's export restrictions. The blue line represents India's exports, or the difference between the demand and supply curves. If India implements export restrictions equal to the length of the red line, (FH) the domestic price will fall until domestic supply is equal to the quota level, at P_3 . Excess ROW demand increases ROW price to P_2 . If no exports are allowed, excess domestic supply reverts prices to their autarky levels (Suranovic, 2007).

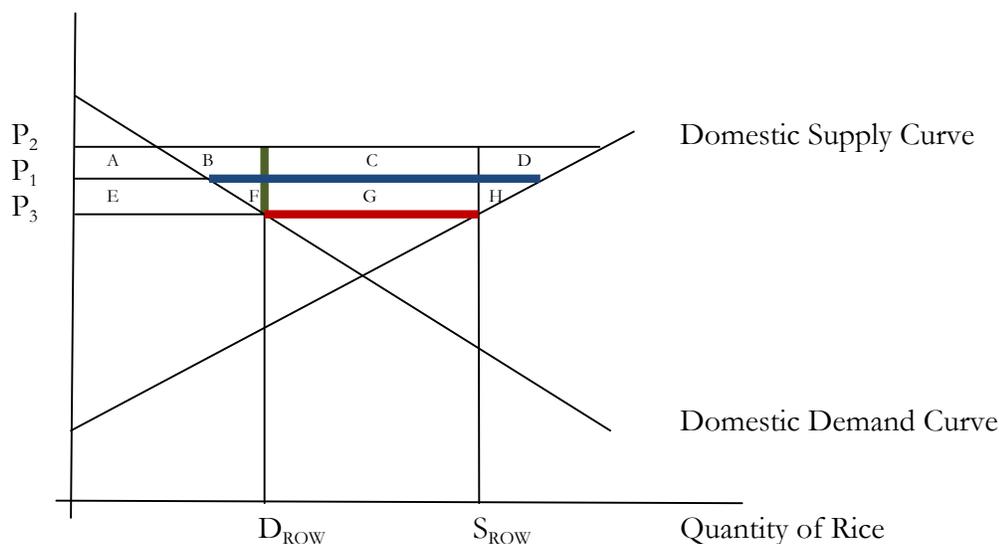
To summarize the domestic welfare effects of restricting rice exports, the quantity of exports declines from the length of the blue line to the length of the red line, or zero with a complete ban. Consumer surplus increases by area E: consumers are better off with lower domestic prices. Producer surplus declines by the total of areas E + F + G + H: producers are worse off with lower domestic prices. There is no government revenue gained since no tax or tariff is applied with a

ban¹. If the loss of producer surplus is less than the gain in consumer surplus, then the government has been successful in raising national welfare (Suranovic, 2007).

Export Tariffs

The imposition of export tariffs has similar pricing effects to export restrictions. Since it will cost more for Indian producers to export the good to ROW and India is under a large country assumption, the ROW price of rice will increase. This higher price will reduce ROW's demand for rice. Decreased ROW demand lowers ROW supply, which shifts the supply of rice back to the domestic market. A higher domestic supply lowers domestic prices, which reduces export supply (Suranovic, 2007). These effects are demonstrated in Figure 4.

Figure 4:
Price of Rice



P_1 is the world price prior to India's export tariff. The blue line represents India's exports, or the difference between the demand and supply curves. After the export tariff is applied, ROW price increases to P_2 and domestic price decreases to P_3 . Since the export tariff is a specific tax, the tax rate equals $P_2 - P_3$, which is equal to the length of the green line. The red line represents the

¹ Export restrictions can result in increased government revenue through quota auctions, but the policy scope reviewed is India's complete ban on non-basmati rice exports.

reduced export supply resulting from the higher domestic supply lowering domestic prices (Suranovic, 2007).

To summarize the domestic welfare effects of export tariffs, the quantity of exports declines from the length of the blue line to the length of the red line. Consumer surplus increases by area E: consumers are better off with lower domestic prices. Producer surplus declines by the total of areas $E + F + G + H$: producers are worse off with lower domestic prices. The Indian government gains tax revenue from the export tariff equal to the total of areas $C + G$. The aggregate welfare effect is found by totaling $C - (F + H)$. If negative, net national welfare has declined due to export tariffs; if positive, net national welfare has improved (Suranovic, 2007).

An increase in net national welfare does not mean everyone is better off; rather, income is redistributed. Government tax revenue gains can be used to offset the redistribution problem by compensating the losers (i.e., producers). This is preferable to export subsidies when prices are already high and domestic supply low, since export subsidies will exacerbate this effect by increasing domestic prices while reducing domestic supply. Consumers that are already worse off from initial price spikes will lose additional welfare. Subsidies collected by the government will be paid to exporters, who are already gaining from high world prices, instead of being redistributed to the losers (i.e., consumers) (Suranovic, 2007).

Thus in theoretical framework, both export restrictions and export tariffs will lower domestic prices and increase domestic supply. Consumers will gain and producers will lose. However, the tax revenue gained from export tariffs can be used to redistribute income from winners to losers. The wisdom of income redistribution depends on the initial welfare of each sector and the size of welfare gains/losses achieved from the protectionist policies. If producers are

large, wealthy landowners and consumers consist of rural poor, a temporary income redistribution would help lift net national welfare.

In addition, deviations from the theoretical results can occur when perfect competition does not exist: welfare effects can differ when a country has a domestic monopoly in the production of a good. While not a pure monopoly, India could be said to have monopoly power in trade since the world price is affected when its trade policies are implemented. When domestic monopoly occurs, an export tariff will always lower the domestic price of rice, whereas export restrictions may or may not. Unlike an exporter with export restrictions, the exporter with a tariff has to pay the tax rate, equal to $P_2 - P_3$ in Figure 4, plus the domestic price of the good, P_3 . If the domestic price charged by the monopolist is higher than P_3 , the domestic price plus tariff will exceed ROW price, P_2 . ROW will import less and the increased domestic supply will lower domestic prices until they reach P_3 (Yeh, 1997).

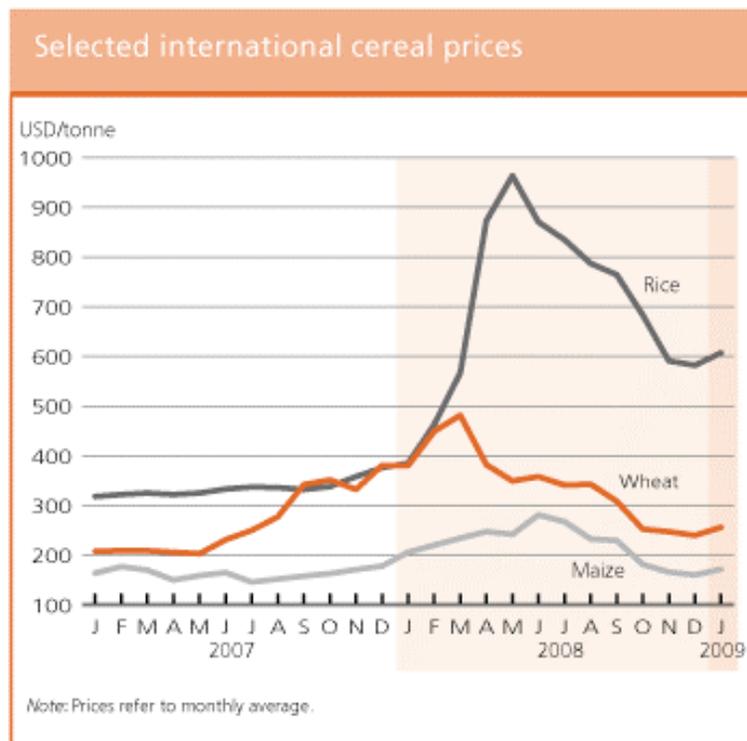
In contrast, after the government prohibits exports, the monopolist will charge P_2 , which is higher than the domestic price before the export restrictions, P_1 , while producing domestic supply levels. Domestic demand does not change. Under domestic monopoly conditions, export restrictions may not lead to domestic price declines, which would hurt consumers and benefit producers (Yeh, 1997). This effect would be contradictory to the Indian government's goals of reducing domestic prices and increasing domestic supply.

Other variations from the given assumptions are reviewed in Section Three. Given that trade policies have varying welfare effects, the appropriate choice of policy is important.

Section Three: Applied Trade Policy

Overview

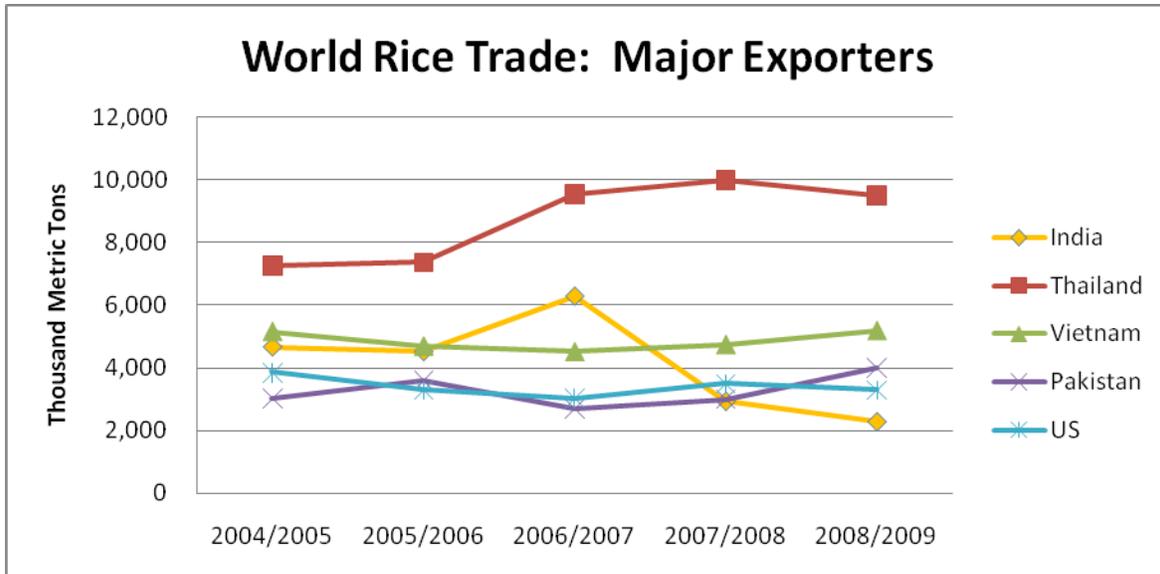
Faced with rapidly increasing food prices from mid-2007 to mid-2008, many countries adopted policy measures to mitigate the impact of high food prices and increase domestic production. Most measures were adopted in an emergency, short-term context and focused on the reduction or suspension of import tariffs and taxes and support to domestic production with agricultural inputs and credits. Although prices declined through the last half of 2008, rice still remained 54% above the December 2007 average price in December 2008 (Food & Agriculture Organization, 2008) and increased 5% over December in January 2009 due to Thailand's agricultural subsidies and large government purchases intended to increase domestic supplies (Food & Agriculture Organization, 2009).



India responded to the increase in food prices with several protectionist trade policies. In February 2008, it banned exports of non-basmati rice (Chandrashekhar, 2008). In April, it imposed a tax of 8,000 rupees per ton on exports of basmati rice (Oryza, 2008). Minimum export prices were increased throughout the year to increase earnings and slow exports. The ban on exports eventually was eased and limited exports were allowed to neighboring countries by mid-October, although minimum export prices were in place (Food & Agriculture Organization, 2008). India's goals were to reduce prices and increase supplies in the domestic market.

India also increased assistance to producers harmed by these trade policies. It maintained and engaged in limited expansion of fertilizer, irrigation, and power subsidies. In February, the Finance Ministry announced that it was budgeting 600 billion rupees for farm debt relief to cancel or reduce the debt owed by an estimated 40 million small farmers (Timmons, 2008). In September, the government's grain procurement and distribution agency, Food Corporation of India, made record procurements of rice to stabilize prices in the open market, intervene if prices rose, and increase aid to the poor. Farmers benefited from an increase in the minimum support price, which rose nearly 22%, to Rs 695 per quintal (Modi, 2008). 60% of the labor force is employed in agriculture (CIA, 2009).

India is the second largest producer of rice, after China, at a projected 97.5 million tons in 2008/2009. Although it consumes, on average, 95% of what it produces, India was still the third largest exporter of rice, after Thailand and Vietnam, with approximately 20% of total rice exports in 2006/2007. After export restrictions, India fell behind Pakistan and the US (see chart below). India's largest trading partners are the US and China (USDA, 2008).



India is the largest producer of basmati rice in the world. Approximately 1% of its rice production is basmati, but unlike other rice varieties, more than 80% of the basmati rice grown is exported. The Gulf nations and Europe are its primary importers, which equates to 1.2 million tons annually (Oryza, 2008). India's climate is well suited for rice production, which is land and labor intensive.

World rice demand experienced an increase by 2.4% in 2009. Consumers are expected to increase consumption of less-expensive staple foods due to the global financial crisis lowering household incomes. On a per capita basis, average rice consumption as food is estimated to rise from 56.9 kg to 57.3 kg (Food & Agriculture Organization, 2009). Global rice production is expected to rise nearly 2% above 2007/2008 production to a record 439.7 million tons. Global rice trade is projected at 29.5 million tons, 1% below 2008 and 8% below a 2007 record (Childs, 2009).

Increases in demand and reductions in trade would drive the world price even higher. A reversal of India's protectionist policies would act to reduce the world price of rice and increase the domestic price as domestic supplies are exported, making domestic consumers worse off while domestic producers gain. Therefore, the national welfare impact that current policies have becomes

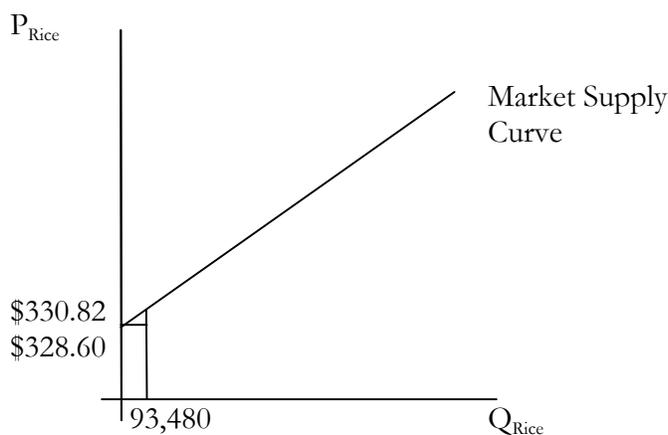
very important to avoid mis-timing future policy reversals intended to assist domestic farmers. The following section reviews the effects of India's protectionist trade policies.

Domestic Effects of Trade Policies

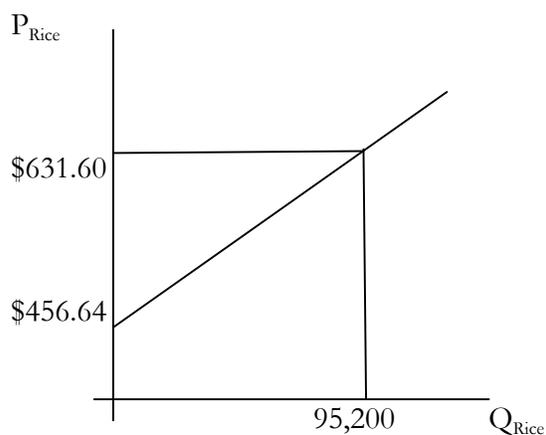
Overall, India's goals were achieved by lowering prices and increasing supplies by 1.5 million tons in the domestic market, although domestic prices of rice increased throughout 2008 despite protectionist trade policies and a good rice crop. By November 2008, prices were 22 rupees per kg, an increase of 38% year over year (Food & Agriculture Organization, 2008). World prices rose 92% year over year for the same period.

Figures 5-7 apply the theoretical concepts of Section Two to outline the effects of India's trade policies in detail.

Figure 5: Consumer surplus, 2007/2008

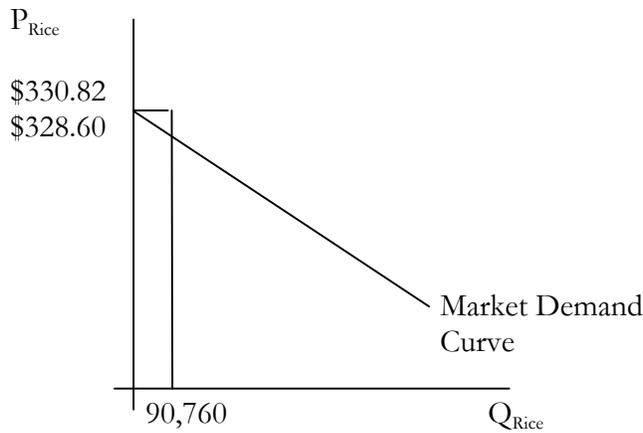


Consumer surplus, 2008/2009

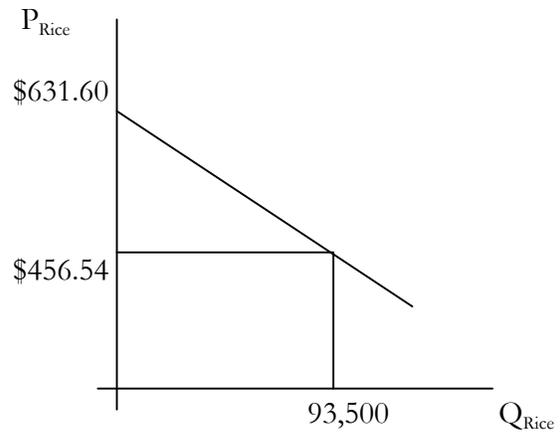


Quantities are per thousand metric tons and represent India's domestic annual production, less exports, of rice for the time period indicated. The fiscal year ends in June; these figures were used to obtain annual estimates. In November 2007, consumer surplus was calculated at a negative \$103.7 million because the domestic price per ton was slightly below the international market price per ton. In reality, transportation costs would have eliminated this discrepancy. In November 2008, consumer surplus was calculated at \$8.33 trillion. This represents a gain in consumer surplus of \$8.23 trillion year over year.

Figure 6: Producer surplus, 2007/2008

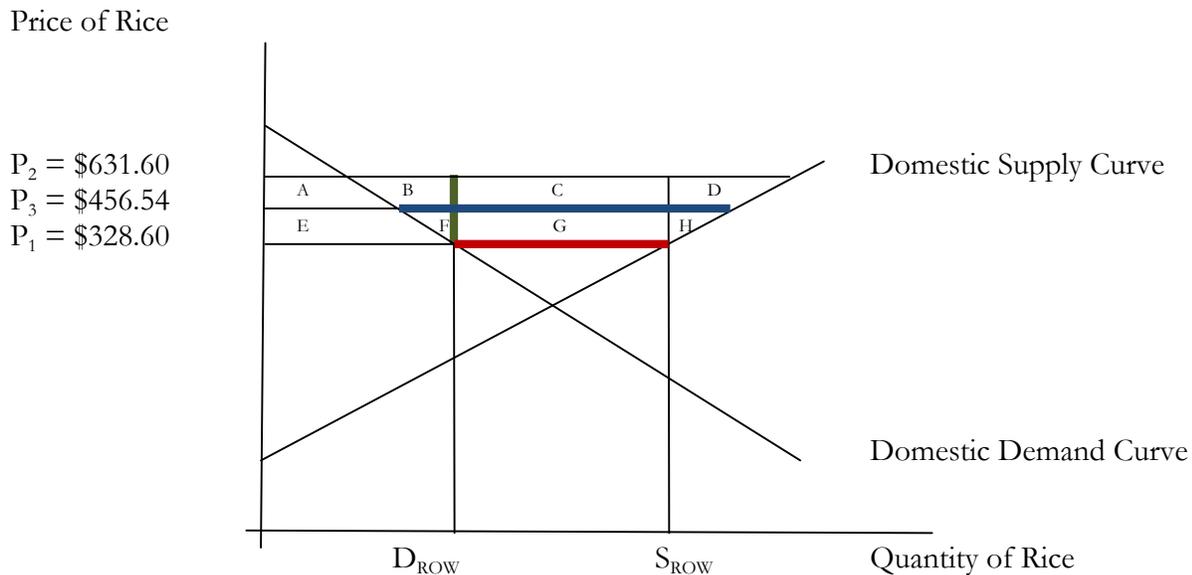


Producer surplus, 2008/2009



Quantities are per thousand metric tons and represent India's domestic annual consumption of rice for the time period indicated. The fiscal year ends in June; these figures were used to obtain annual estimates. In November 2007, producer surplus was calculated at \$101 million because the domestic price per ton was slightly below the international market price per ton. In reality, transportation costs would have eliminated this discrepancy. In November 2008, producer surplus was calculated at negative \$8.18 trillion. This represents a loss in producer surplus of \$8.08 trillion year over year.

Figure 7:



— = India's exports before trade policies = 2,950,000 metric tons (2007/2008)

— = India's exports after trade policies = 2,300,000 metric tons (2008/2009)

— = estimated basmati government fixed tariff = \$163.40

P_1 = world price per ton before trade policies = \$328.60 (November 2007)

P_2 = world price per ton after trade policies = \$631.60 (November 2008)

P_3 = domestic price per ton after trade policies = \$456.54 (November 2008)

Data source for Figures 5-7 (USDA, 2008)

Year over year November prices were used to mitigate price effects caused by market over-reaction and speculation immediately after the trade policy announcements. Prices are blended between basmati and non-basmati rice, so P_3 plus the tariff rate will not equal P_2 as the theory suggests. The exchange rate from the first day of the applicable month was used to calculate USD price per ton; these were obtained from the Reserve Bank of India. Prices are not adjusted for inflation, since year over year inflation increases were nominal, and are per metric ton. In addition, the effect of minimum export prices was not calculated. While this certainly had an impact, the data necessary to make a relevant evaluation was not available.

To summarize the effects of protectionist trade policies, India's exports decreased by 650,000 metric tons despite an increase in world demand from 428 million metric tons to 432 million metric tons. Consumer surplus (E) increased by \$8.23 trillion. Producer surplus (E + F + G + H) decreased by \$8.08 trillion. Amortizing the annual exported basmati rice average of 1.2 million tons over a seven month period, government revenue (C + G) increased by \$114.4 million. When adding all gains and losses, national welfare increased by \$260 million.

Overall, the policies appear to have been successful in increasing national welfare, although not to the extent that theory would suggest. Although the consumer gain and producer loss appear to cancel each other out, producers were disproportionately affected given their smaller numbers. Assuming 40% of India's labor force is in rice production, this equates to a \$27.80 loss per producer compared to a \$7.17 gain per consumer. However, this calculation does not take into account the high levels of government support that producers received, including debt reduction and agricultural input subsidies.

The policy actions seem to have limited the full transmission of world price increases to the domestic market, but domestic prices lower than the original world price did not result as the theory would suggest. This could be due to minimum export pricing skewing the price upwards or monopoly power reducing the intended effect of export restrictions, as outlined in Section Two. Since 80% of basmati rice production is exported and very little consumed domestically, the greater domestic price reduction resulting from export tariffs for this single commodity would have had less of an effect on consumer welfare than export restrictions on non-basmati rice and could have caused some price distortion in the analysis (i.e., domestic prices would have trended higher if only non-basmati prices were analyzed). Unfortunately, prices were not broken out by rice variety, so this analysis could not be done. Although basmati prices are higher than non-basmati rice prices, any effect would be small since basmati consists of only 1% of total rice production.

Other factors could contribute to an increase in domestic prices. India typically experiences an average economic growth of 9%, although this slowed in 2008: inflation and the international credit crisis negatively affected demand. The rupee depreciated over 20% in 2008 (Coface, 2009), which would have helped to make rice exports competitive in the world market, had they not been banned. Inflation hit an all-time high of 7.33% in April (2008), but expansionary monetary policy (i.e., interest rate cuts) and the fall in commodity prices slowed this to 3.03% in February (2008). Increasing inflation was caused by high energy and commodity prices (Goyal, 2009). Slowing growth and inflation will negatively impact prices. Currency depreciation will make imports more expensive, which could transfer domestic purchases from higher priced imported grains to domestically produced rice, further reducing supply and increasing prices.

Caveats

An underlying assumption is that rice is a homogenous good that is perfectly substitutable. This assumption does not hold in reality. Unlike other bulk commodities, the international rice market is segmented into a large number of varieties and qualities which are not easily substitutable because of strong consumer preferences. India's higher grade varieties are usually exported, with the domestic market absorbing medium and low grades (Food & Agriculture Organization of the United Nations, 2003). Basmati, a long grain rice known for its favorable fragrance, is grown exclusively in India and Pakistan. These two countries have partnered to gain geographical indication, which will prevent other countries from claiming the right to label or patent their rice as basmati (Kannan, 2008).

While the partial equilibrium approach is useful for isolating the effects of trade policy on national welfare, it assumes that the rice sector has little impact on other sectors in the economy and ignores the effects occurring to other industries as a result of the policy actions (Suranovic, 2007). India's decision to restrict rice exports was in response to increasing world prices for wheat, a major

food consumption and import item. High food prices are expected to continue in the medium run as biofuels production increases in response to policies aimed at reducing carbon dioxide emissions and achieving energy security. Although rice typically is not used for biofuels production, wheat is; as grain is diverted for biofuels production and subsequently rises in price, rice consumption will increase. This substitution may present strong trade-offs between energy and food security objectives (Christiaensen, 2008). While a general equilibrium approach would be better suited to analyze these effects, it is outside the scope of this paper.

Section Four: Conclusion

India is a major producer and exporter of rice, a staple commodity vital to the food security and welfare of over half the world's population. Since it consumes 95% of the rice it produces, rice prices are an integral part of national welfare to both consumers and producers, forcing the Indian government to face competing concerns when implementing policy.

The protectionist trade policy actions undertaken in 2008 resulted in an estimated \$260 million increase to national welfare. Consumers benefited from lower prices and the loss to producers was offset by government aid, including debt reduction. While its policies appeared to limit the transmission of higher world prices to Indian consumers, India's monopoly power in the production of rice could have limited the full effect of the price decrease. In this regard, export tariffs for all varieties of rice would have been more beneficial in lowering prices and increasing domestic supply than export restrictions.

In reality, the implementation of protectionist trade policies brings other difficulties since world welfare is reduced at the expense of increased national welfare. Trading partners will oppose these policies and look for ways to mitigate their welfare decline or retaliate with protectionist measures of their own. Once India banned all non-basmati rice exports, other large exporting countries followed, including Thailand and Indonesia. While these governments could buy rice supplies and flood their domestic markets, decreasing domestic prices and improving consumer welfare, the impact on the thinly traded rice market was dramatic as world prices rose sharply. Since India imports very little rice, its consumers are not affected by world prices as are those from large importing countries like Indonesia, Iran, and Iraq. Price volatility and shortages in foreign countries from export restrictions led to serious beggar-thy-neighbor effects.

In the long run, export restrictions could have significant consequences for India and rice producers. A limited impact on domestic prices and a negative earnings effect for farmers could encourage smuggling and hoarding, exacerbating the issue. Importing countries could move to self-sufficiency or alternatives to rice, decreasing trade opportunities, growth, and efficiency (Christiaensen, 2008). India's production-oriented aid measures could become fiscally impossible to sustain. Public sector debt is very high, which undermines capital investment through heavy debt service burdens (Coface, 2009). Meeting future rice demand will be a challenge, given the increasing competition for land and water and environmental degradation. While protectionist trade policies have proved beneficial to India in the short run, the effect is not sustainable.

Bibliography and References

- Chandrashekhkar, G. (2008, 02 12). *Confusion over rice export ban notification*. Retrieved from The Hindu Business Daily: <http://www.blonnet.com/2008/02/13/stories/2008021350471300.htm>
- Childs, N. (2009). *Rice Outlook, February*. Washington, D.C.: USDA.
- Christiaensen, M. B. (2008). *Rising Food Prices in East Asia: Challenges and Policy Options*. Brussels: World Bank.
- CIA. (2009, February 24). *CIA World Factbook*. Retrieved from CIA: <https://www.cia.gov/library/publications/the-world-factbook/geos/in.html>
- Coface. (2009). *Risk Assessment: India*. Retrieved from <http://www.trading-safely.com/sitecwp/ceen.nsf/vwCRA/96AD8A205EECC63DC125720A0045B4FD?OpenDocument>
- Food & Agriculture Organization. (2008). *Crop Prospects & Food Situation, December*. Rome: FAO.
- Food & Agriculture Organization. (2009). *Crop Prospects & Food Situation, February*. Rome: FAO.
- Food & Agriculture Organization of the United Nations. (2003). *Sustainable Rice Production for Food Security*. Rome: FAO.
- Goyal, K. (2009, March 5). *India's Inflation Slows to 3.03%, Lowest Since 2002* . Retrieved from Bloomberg: <http://www.bloomberg.com/apps/news?pid=20601091&sid=aVXvlAV2CFpY&refer=india>
- Kannan, S. (2008, February 15). *India and Pakistan link to protect Basmati* . Retrieved from BBC: <http://news.bbc.co.uk/2/hi/business/7246900.stm>
- Modi, A. (2008, September 10). *FCI procurement of rice, wheat touches 50 MT*. Retrieved from Business Standard: <http://www.businessstandard.com/india/news/fci-procurementrice-wheat-touches-50-mt/333894/>
- Mortished, C. (2008, March 7). *Already we have riots, boarding, panic: the sign of things to come?* Retrieved from Times Online: <http://www.timesonline.co.uk/tol/news/environment/article3500975.ece>
- Oryza. (2008, April 30). *India Imposes Export Tax On Basmati Rice*. Retrieved from Oryza: <http://oryza.com/Basmati-Rice-Industry/India-Basmati/8419.html>
- Oryza. (2008, May 1). *India: Export Tax Hampering Basmati Rice Shipments*. Retrieved from Oryza: <http://oryza.com/Asia-Pacific/India-Market/8426.html>
- Suranovic, S. (2007). *International Trade Theory and Policy*. Retrieved from Trade Policy Effects with Perfectly Competitive Markets: <http://internationalecon.com/Trade/Tch90/Tch90.php>

Timmons, H. (2008, February 29). *Indian budget aids farmers with big rise in social outlay*. Retrieved from International Herald

Tribune: <http://www.ihf.com/articles/2008/02/29/business/rupee.php>

USDA. (2008). *Grain: World Markets and Trade, December*. Washington, D.C.: USDA.

Yeh, Y.-H. (1997). Export Quotas Vs. Export Tariffs. *Atlantic Economic Journal*, 207-212.