

VII. AGRICULTURAL TRADE AND GOVERNMENT INTERVENTION: A PERSPECTIVE FROM A DEVELOPING COUNTRY

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Introduction

Since the Uruguay Round negotiating mandate sought “greater liberalization of trade in agriculture”, WTO members have been locked in an intense debate on the nature and extent of trade liberalization in agriculture. Various perspectives of agricultural trade liberalization have come to the fore in the debate. The proponents of the trade liberalization agenda have argued aggressively in favour of dismantling the tariff walls as, in their view, this would bring significant global welfare gains. However, opposing voices have emphasized the fact that significant non-trade concerns exist, which would have to be given precedence over the trade agenda. This chapter reviews traditional arguments for trade liberalization and provides a closer look at the additional reasons for use of government intervention, including trade policy, in agriculture in a developing country, with particular reference to India.

A. Rationale for liberalizing agricultural trade

The case for liberalizing agricultural trade has been built on arguments, the origins of which can be traced back to the pure theory of international trade. According to these arguments, trade liberalization provides the “optimal solution”, but only under “ideal” market conditions. Some of the key assumptions that are made in this regard are that: (a) markets are assumed to be perfectly competitive; (b) producers minimize costs subject to constant returns to scale; (c) consumers maximize their utility; and (d) all markets, including that for labour, are cleared with flexible prices.

While the earlier studies enumerated the welfare implications of adoption or otherwise of free trade policies in largely conceptual terms, the more recent studies have provided precise estimates of the welfare gains that would result from the liberalization of agricultural trade. Among the more influential of these studies are those that have used general equilibrium models.

In a series of papers published during the past few years, World Bank economists have provided detailed projections by simulating the possible outcomes of the Doha Round negotiations.¹

¹ The most quoted of these papers are by Kym Anderson, Will Martin and Dominique van der Mensbrugge (2005 and 2006) and Van der Mensbrugge (2004); see reference list. See also chapters IV and V in this volume.

The first major set of results reported in the papers pertains to the effect of the ongoing trade liberalization efforts on real income up to 2015. These estimates have been made against the benchmark that assumes a complete freeing of merchandise trade over the period 2005-2010. It has been projected that real income gains by 2015 for the global economy as a whole would be US\$ 287.3 billion per year (in 2001 US dollars). Of this increase, the share of developed countries would be US\$ 201.6 billion while for the developing countries the gains would be US\$ 85.7 billion. In other words, the share of the developing countries would be a third of the total global gains. More importantly, real income gains reported for the developing countries would be 0.8 per cent of the baseline income in 2015, which is marginally higher than the corresponding figure for the developed countries (0.6 per cent). Among the developing countries, the relatively prosperous Latin American region is expected to register real income, which would be 1 per cent of the baseline income in 2015 while for the South Asian region the corresponding figure would only be 0.4 per cent.

These broad results lend themselves to two varying interpretations. The first one, which has been provided in the papers referred to above, is that the results are significantly favourable for the developing countries since their expected real income gains are considerably larger than their existing share in global production. Thus, while the developing countries as a whole account for a quarter of the global production at present, they would be able to enjoy a third of the global gains in real income that is expected annually until 2015. An alternate view would be that the results are pointing to the increasing gulf between the relatively prosperous and poorer regions and countries.

In overall terms, it could be said that the disproportionately large gains for the developed countries that the papers under discussion have predicted would reinforce the status of the lesser players in the global economy as “developing”, even after the so-called “development round” has been implemented. What is more, the results point to increasing differentiation between the developing countries, as the more prosperous regions are slated to record relatively larger increases in real income.

The disaggregated results provided for a small set of countries broadly reinforce the above-mentioned conclusions. India is expected to register a real income gain of only US\$ 3.4 billion a year, which is 0.4 per cent of the base line income in 2015. In the case of China, the corresponding figures are US\$ 5.6 billion and 0.2 per cent, respectively. On the other hand, countries such as Thailand are expected to gain US\$ 7.7 billion, while for Argentina the real income gain could be nearly US\$ 5 billion.

Although the proponents of trade liberalization have made significant claims about the gains that would arise from dropping the tariff walls, the empirical evidence provided by the stylised models fails to provide clinching proof that the lesser players in the global economy would have much to gain from the process. An important issue that arises in this context is whether the models have made the right predictions, given that they represent a vastly simplified image of the real world. Most significantly, the theoretical basis of these models, i.e., a distortion-free perfectly competitive world, needs to be re-assessed (Dhar, 2006 and chapter V in this publication).

Indeed, through the many decades that trade theory has been developing, it has been at pains to evolve a credible conceptual framework that can capture cross-border transactions. One of the major challenges that trade theory has been confronted with is the provision of a sound basis for the “appropriate set of policy interventions that can accommodate the plethora of distortions that rule the real world. The use of trade protection measures has been an anathema for the economists credited with developing the so-called “pure theory” of trade. In fact, much of the debate on trade theory in the decades prior to the advent of strategic trade theory – which boldly announces the use of government interventions for realizing national policy objectives, given the reality of imperfectly competitive markets – has tried to provide narrowly defined exceptions for the use of interventions. The following section provides an account of how trade theory has dealt with the issue of the use of interventionist policy.

B. Trade theory and the use of interventions

The free trade world, as several generations of economists have reminded us, provides Pareto optimal outcomes. The equilibrium is reached as the marginal rate of transformation in domestic production and the marginal rate of substitution in consumption and foreign trade would be equalized. Furthermore, under assumptions of free trade, domestic prices are equalized with landed, foreign prices – and domestic prices are equated with the marginal rate of transformation in production and the marginal rate of substitution in consumption. Argued in a somewhat different framework, proponents of the free trade ideal put forth the notion that opening up of trade, from an erstwhile situation of trade restrictions, would result in global welfare maximization in the long term. The gains would accrue as trade creates conditions for securing benefits through comparative advantage (Bhagwati, 1969, p.11ff.).

The fundamental proposition that a protagonist of free trade would make is that adjustment costs do not arise in the long-term perspective. The process through which this happens was well summarized by F.W. Taussig: “The free trader argues that if the duties were given up and the protected industries pushed out of the field by foreign competitors, the workmen engaged in them would find no less well-paid employment elsewhere”.² Gottfried Haberler (1950) formulated the same idea, but somewhat differently: “We may conclude that in the long term the working class as a whole has nothing to fear from international trade, since, in the long term, labour is the least specific of all factors. It will gain by the general increase in productivity due to the international division of labour, and is not likely to lose at all seriously by a change in the functional distribution of national income”.³

² F.W. Taussig, *Principles of Economics* (1939, p. 516), quoted by Stolper, Wolfgang and Paul A. Samuelson (1941).

³ Gottfried Haberler (1950), “The Theory of International Trade”, quoted by Stolper, Wolfgang and Paul A. Samuelson (1941).

Conceptualized in the terms of the two-factor framework, the meaning of the above conclusions arrived at by Taussig and Haberler is fairly obvious. Unemployment of resources would be ruled out in a free trade world, since the lowering of protection would automatically trigger an adjustment process that would result in a market clearing outcome.

These virtues of free trade notwithstanding, it was argued that use of protectionist measures could be justified under specific circumstances. In the view of Haberler (1950) and subsequently H.G. Johnson (1965), one such situation would be when there was immobility of the factors of production or factor prices suffered from rigidities.

It may be pointed out that a situation of factor immobility in relative terms, in particular involving the labour force engaged in the rural sector, is the stark reality that faces many developing countries. In those countries, although the relative importance of agriculture has declined quite significantly in recent years (as is apparent from the declining share of the sector in GDP, the share of the rural population has not declined in any meaningful manner. Table 1 captures this reality for some developing countries, including India and China.

Table 1. Changing importance of agriculture and the rural sector in selected developing countries

Year	China		India		Indonesia		Low income developing countries	
	Agriculture, value added (% of GDP)	Rural population (% of total)	Agriculture, value added (% of GDP)	Rural population (% of total)	Agriculture, value added (% of GDP)	Rural population (% of total)	Agriculture, value added (% of GDP)	Rural population (% of total)
1970	35.2	82.6	46.1	80.1	44.9	82.5	43.6	81.3
1975	32.4	82.6	41.3	78.8	30.2	80.5	39.7	79.7
1980	30.1	80.4	38.9	77.0	24.0	78.4	36.6	77.4
1985	28.4	77.0	33.7	75.7	23.2	73.6	34.3	76.1
1990	27.0	72.3	31.3	74.5	19.4	69.7	32.4	74.7
1995	19.8	68.9	28.2	73.4	17.1	64.2	29.9	73.2
2000	14.8	64.4	23.7	72.1	15.6	58.3	26.8	71.6
Change between 1970 and 2000	57.9	22.1	48.6	10.0	65.3	29.4	38.6	11.9

Source: World Development Indicators (2006).

The asymmetry between the fast decline of agriculture's share in GDP and the slow fall of the share of rural population is most significant in China and India. The situation looks particularly difficult for India, which has seen a halving of the share of agriculture in GDP over the past three decades while the share of its rural population has declined by a mere 10 per cent. It is also important to note that paid employment in

agriculture in India (about 5 per cent in 2004) falls very much behind China (60 per cent in 2003), Indonesia (44 per cent in 2005) and some other developing countries, according to International Labour Organization Online Statistics and Asian Development Bank Kew Indicators.

This situation has emerged in many developing countries because of a structural bias against agriculture in the so-called development policies that those countries have adopted over the past several decades. One of the manifestations of the bias against agriculture was reflected in the form of distortions in the labour market. Johnson (1965) offered two reasons for such a distortion that are commonly advanced in the literature on economic development, both of which pertain to distortion in the labour market. First, earnings of labour in agriculture exceed the marginal productivity of agricultural labour, so that the industrial wage must exceed the alternative opportunity cost of labour. Second, industrial wages exceed wages in agriculture by a margin greater than can be accounted for by the disutility or higher cost of urban life.

It may be argued that most distortions, including those in the labour market, in developing countries were imposed by adopting policies that provided excessive protection to the industrial sector. In many cases, agriculture was also taxed, in the sense that the imperatives such as attainment of food security and, in particular, providing the population with the basic food items at affordable prices was responsible for agricultural producers being unable to realize the efficiency prices for their products.

The policy bias against agriculture in developing countries was reflected in the tardy deployment of the relatively scarce resource, capital. India stands out as a case in point. In the early 1980s, the share of agriculture in the gross capital formation in the country was close to 20 per cent; however, by the turn of the century, this figure had declined to a mere 6 per cent, despite overall growth in investment across the whole economy. Quite clearly, therefore, agriculture in India has been affected by the domestic distortion, caused largely by the policy bias. Under such circumstances, trade theorists may require interaction in the form of tariffs or subsidies, or both.

Bhagwati and Ramaswami (1963) provided a conceptual framework for the use of tariffs and subsidies in the presence of domestic distortions. Given the objective of realizing an optimum solution that is characterized by the equality of the foreign rate of transformation (FRT), the domestic rate of transformation in production (DRT) and the domestic rate of substitution (DRS), Bhagwati and Ramaswami postulated that a policy permitting the attainment of maximum welfare involved a tax-cum-subsidy on domestic production. A tariff-alone policy would, in their view, equate DRT and FRT, but would destroy the equality between DRS and FRT. By the same token, a subsidy-alone intervention would tend to establish parity between DRT and FRT, but would destroy the equality between DRS and DRT.

If, in the earlier decades, trade theorists were discussing issues related to distortions as exceptional cases to the free trade ideal that they stood by, in recent decades the advent of strategic trade theory changed all of that. The 1970s saw the

initiation of a discourse that challenged the fundamentals of the traditionalist view of trade theory. This body of literature was based on the premise that global markets were characterized by imperfect competition. Using the conceptual bases from the theory of industrial organization, the proponents of this view argued that under imperfect competition, there was a possibility that interventionist trade policies might have beneficial “strategic” effects (Helpman and Krugman, 1989). Based on this understanding, the strategic trade theorists have analysed various situations in which government intervention can be justified.

The original idea of strategic trade theory was propounded by Brander and Spencer (1981 and 1984),⁴ who showed that government intervention could raise national welfare by shifting oligopoly rents from foreign to domestic firms. They argued that the grant of export subsidies would have the effect of a deterrent on foreign exports, as a result of which profits of the home firm would rise more than the amount of subsidy. This would result in a rise in home income through increased rent capture by a domestic firm. Little or no consideration, however, was given to domestic consumers in those early models on strategic trade policy.

The large body of literature that has since emerged has provided analytical insights into the functioning of the various sectors (largely in the context of the United States’ economy) in which interventions of the type that this school of trade theory has tried to conceptualize are prevalent.⁵ These studies have assessed the potential gains from using strategic trade policies. They have concluded that carefully designed import tariffs or export subsidies can ensure better outcomes than free trade in certain markets, mostly in differentiated manufactured products associated with oligopolistic market structures. At the same time, however, the authors emphasized the point that their findings should in no way be interpreted as general support for pro-interventionist policies.

While it is industry that has been the focus of analytical studies using strategic trade theory, there have been some attempts to look at “strategic trade” issues in agriculture (Reimer and Stiegert, 2006). Arguably, a number of markets for agricultural products are also associated with a high concentration of “agents”, indicating potential applicability of “strategic” policy interventions in the agricultural sector by developing countries. Hamilton and Stiegert (2002) and Dong, Marsh and Stiegert (2006) examined the case of the Canadian Wheat Board (CWB) in the international durum wheat market; the latter examined CWB and Australian Barley Board (ABB) in the malting barley market (Reimer and Stiegert, 2006). These studies argued that state trading enterprises (STEs) such as CWB and ABB fitted the requirements associated with strategic trade theory in at least three major ways. First, the markets for both durum wheat and malting barley are characterized by imperfect competition. While CWB was found to be controlling 40-60 per cent of the global durum wheat market, the malting barley market was effectively controlled by CWB and ABB. Second, the respective governments had made unilateral prior commitments to both CWB and ABB. Finally, STEs maintained legal and executive control over the instruments of

⁴ See also Paul R. Krugman (1990).

⁵ For a comprehensive survey, see J.A. Brander (1995).

strategic trade and the quantity traded. This, according to the studies, gave CWB and ABB an advantage over independent firms, which may also have strategic delegation issues and asymmetric information problems.

Although available studies have indicated that the use of strategic trade theory is more of an exception, the reality seems to be at considerable variance with this point of view. Over the past several decades, governments in the developed world, particularly those of the United States and the European Union, have de facto used strategic trade theory to maintain their domination over the global markets for major agricultural commodities.⁶ The instrumentalities for using strategic trade theory were provided by the farm policies that the United States and the European member countries have been adopting since the 1950s without being subjected to multilateral discipline.⁷ For example, the farm policy instruments are aimed at managing output in the markets that have often suffered because supplies have far exceeded what the markets can carry.

The use of policy instruments by the United States and the European Union to improve their advantage in the global agricultural markets has resulted in an interesting debate in the context of the reshaping of the global agricultural policies, in which the World Trade Organization (WTO) is currently engaged. Initiated by the developing countries, this debate makes the point that the persistence of distortions in the global agricultural markets requires "strategic" interventions on their part. These interventions combined with sound distributive policies, they argue, are necessary for safeguarding the livelihoods of the multitude of marginal farmers that dot the agricultural landscape in their countries in addition to ensuring that the food security concerns are met.

C. A case for special products as 'strategic' interventions

The debate on agricultural trade liberalization that WTO negotiations created two decades ago, has brought to the fore a range of issues that have posed serious challenges to formulating trade policies. Particularly significant in this context are the articulations made by the developing countries, which claim that development concerns stemming from the imperatives of meeting the objectives of food security and livelihoods have to form an integral part of the new trade disciplines. In other words, those countries have been emphasizing that the focus of trade policy must shift away from the realization of the free-trade ideal, as has been the case hitherto, to one that provides the space to use instruments for meeting these development concerns.

⁶ While the United States and the members of the European Union control nearly 50 per cent of wheat exports, the United States has a share in excess of 50 per cent in the exports of soybeans and maize.

⁷ Although the United States has been using its farm policy to provide a strategic advantage to its farm sector since the 1930s, it received legal sanction to use the farm policy instruments after the General Agreement on Tariffs and Trade (GATT) Contracting Parties agreed to grant a waiver from the application of Articles II and XI of GATT (see GATT [1955]). In 1957, the Treaty of Rome (known more often as the Treaty establishing the European Economic Community) established the basis of the Common Agricultural Policy that has directed agricultural policy of the European Union member States.

The cornerstone of this changed focus of trade policy-making, in the author's view, should be the proposal by most of the major developing countries to adopt the twin instruments of Special Products (SPs) and the Special Safeguard Mechanism (SSM) as a way to address concerns of food security, livelihoods and rural development.⁸ By suggesting the adoption of these instruments, the developing countries have emphasized that "strategic" interventions such as the use of tariff protection are essential for the realization of development objectives.

Inadequacies in understanding the concerns raised by developing countries using the traditional trade theory framework have been aptly demonstrated in a recent paper by Ivanic and Martin (2006), in which they critically commented on the proposal to introduce SPs that developing countries have made. They commented that increased protection from the use of SPs "effects poverty through three broad channels". The first is the effects of commodity prices and wages on incomes in the short term. The second is through the efficiency of resource allocation, and hence aggregate real national income, as resources are diverted away from the activities that yield the highest social returns into those that generate the highest market returns at distorted prices. The third is through changes in productivity – as resources are diverted away from export-oriented activities towards import replacement, productivity tends to fall.

With regard to the first point, it needs to be stated that while Ivanic and Martin were concerned about the detrimental effect of commodity price rises on urban consumers, most developing countries would like to use SPs to influence commodity prices and wages to benefit farm households. It may be argued that the main reason for using the instrument of SPs is to ensure reversal of the secular decline in commodity prices, and in particular prices of commodities that are critical for providing livelihood security for farm households. In past decades, low commodity prices have reduced the farmers in developing countries to a marginalized existence; this situation can become far worse if the subsidized commodities are allowed to enter developing country markets for "promoting" trade.

According to Ivanic and Martin (2006), the second adverse effect of protecting SPs would be the diversion of resources "away from the activities that yield the highest social returns into those that generate the highest market returns at distorted prices". It is argued here that the purpose of SPs is precisely to divert resources into agriculture since this would yield the highest social return in the medium to long term. As indicated above, the policy bias against agriculture had militated against the flow of resources into the sector, which supports an overwhelming majority of workforce in many developing countries, including India. This policy bias can be set right by providing adequate protection for products that are sensitive in nature by using the mechanism of SPs.

They commented that the third concern was that SPs would result in diverting resources away from "export-oriented activities towards import replacement", causing

⁸ The G33 group of developing countries took the lead in proposing that SPs and SSM should be included in the new agriculture deal. Subsequently, the G20 group also lent its support to the G33 proposal.

productivity to fall. This again exposes their limited understanding of economic realities. Contrary to their understanding that SPs are to be viewed from the trade perspective, developing countries have argued that SPs would ensure the realization of food security and protection of livelihoods, which stand out among the major objectives of development policy. Those countries have frequently argued that that the twin objectives of food security and livelihoods protection should be viewed as non-trade concerns.

The issue of food security was identified as a major objective to be pursued by the global community in the Rome Declaration on World Food Security and the World Food Summit Plan of Action in 1996. The Summit emphasized that food security existed when “all people at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”. The Rome Declaration took into consideration the multifaceted character of food security and emphasized that “concerted national action and effective international efforts” were needed to “supplement and reinforce national action.” The Plan of Action adopted by the World Food Summit proposed that “each nation must adopt a strategy consistent with its resources and capacities to achieve its individual goals and, at the same time, cooperate regionally and internationally in order to organize collective solutions to global issues of food security.” In addition to emphasizing the importance of national policies, the Rome Declaration and the Plan of Action presented an interesting perspective on the role of trade in the pursuit of food security. The participating countries expressed their commitment to “strive to ensure that food, agricultural trade and overall trade policies are conducive to fostering food security for all through a fair and market oriented world trade system.” Thus, quite contrary to the view that imperatives of trade should be given primacy, as is the underlying theme of the received wisdom in trade policy-making, the World Food Summit emphasized that food security should be the primary concern of the global community.

The emphasis on ensuring food security by making all possible efforts at the national level to do so, appear justified on at least two counts. First, global trade in major commodities has not expanded during the past decade despite the enhanced focus on trade expansion, particularly since the establishment of WTO. Table 2 illustrates this fact.

Table 2. Share of global exports in production of major cereals

(Unit: Percentage)

Global exports to production	1995	1998	2000	2002	2003	2004
Rice	6	8	6	7	8	7
Wheat	23	22	24	26	25	23
Maize	17	14	15	16	15	13

Source: Food and Agriculture Organization of the United Nations, FOSTAT.

As indicated in table 2, rice has been the least traded among the major cereals, with global exports as a share of production not exceeding 10 per cent, since 1995. Even in the case of wheat, which is traded the most among the major cereals, the share of global exports has not been significantly higher than a quarter of the global production. Given such a scenario, countries would indeed be risking their futures if they decided to rely on the global market for their food supplies.

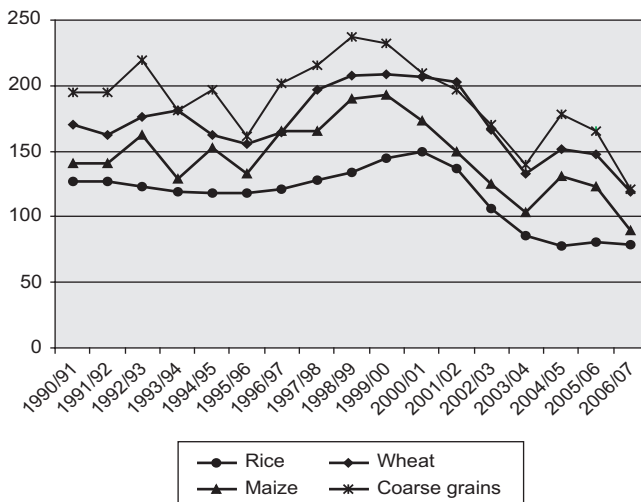
This point is further corroborated by the fact that global stocks of major cereals have been declining rather sharply since the late 1990s. The figure below captures this phenomenon.

It can be seen from the figure below that global stocks of the major cereals have experienced steep declines since the late 1990s to reach their lowest levels since 1990. The sharpest decline has been in case of maize, with global stocks having declined by nearly 54 per cent since 1999-2000.

In summary, the message for policy makers is that it is necessary to retain enough policy space for “strategic” interventions that seek to address development concerns as important as food security, and rural employment and livelihood. Such policy space may include the ability to set import tariffs on selected agricultural products, as an affordable way to counterbalance direct or indirect (and possibly “strategic”) support provided mainly by developed countries to their own agriculture sector. This is also a policy that may encourage allocation of resources to rural areas, where most of the poor in developing countries still live. The literature has often failed to distinguish between policy interventions of the kind suggested above and the use of protectionist measures for supporting the dominant interest groups. It is hoped that the discussion in this chapter will contribute to more careful and fuller consideration of the motives underlying the use of trade policy instruments in development strategies. Furthermore, the same more careful approach should be useful when entering preferential trade negotiations, even when they are expected to result only in a limited liberalization of trade.

Year-wise ending stocks of major cereals, 1990/91-2006/07

(Million tons)



Source: United States Department of Agriculture, "Production, supply and distribution online", available at <http://www.fas.usda.gov/psdonline/psdHome.aspx>.

References

- Anderson, K., W. Martin and D. van der Mensbrugge, 2005. *Market and Welfare Implications of Doha Reform Scenario*. Available at: <https://www.gtap.agecon.purdue.edu/resources/download/2241.pdf>.
- _____, 2006. "Market and Welfare Implications of Doha Reform Scenarios", in K. Anderson and W. Martin (eds.), *Agricultural Trade Reform and the Doha Development Agenda*, London, Palgrave Macmillan, and Washington, D.C., World Bank. Available at: http://siteresources.worldbank.org/INTRANETTRADE/Resources/239054-1109114763805/Ch12_AndersonMartinMensbrugge.pdf.
- _____, 2005. "Distortions to world trade: Impacts on agricultural markets and farm incomes", CIES Discussion Paper 0519, University of Adelaide.
- Bhagwati, J., 1969. *International Trade: Selected Readings*, Penguin, Middlesex.
- Bhagwati, J. and V.K. Ramaswami, 1963. "Domestic distortions, tariffs and the theory of optimum subsidy", reproduced in American Economic Association *Readings in International Economics*, 1968, George Allen and Unwin, London.
- Brander J.A., 1995. "Strategic trade policy", National Bureau of Economic Research Working Paper No. 5020.
- Brander J.A. and B.J. Spencer, 1981. "Tariffs and the extraction of foreign monopoly rent under potential entry" *Canadian Journal of Economics* 14, pp. 371-89.
- Brander J.A. and B.J. Spencer, 1984. "Tariff protection and imperfect competition", in H. Kierzkowski (ed.), *Monopolistic Competition in International Trade*, Oxford University Press, Oxford.
- Dhar, B., 2006. "Modelling the Doha Round outcome: A critical view, ARTNeT Working Paper Series, No. 6.
- Dong, F., T. Marsh, and K. Stiegert, 2006. "State trading enterprises in a differentiated environment: The case of global malting barley markets", *American Journal of Agricultural Economics*, 88, No. 1, pp. 90-103.
- Food and Agriculture Organization of the United Nations, FAOSTAT. Available at: <http://faostat.fao.org/site/352/default.aspx>
- General Agreement on Tariffs and Trade, 1955. "Report of Working Party 6 on the United States waiver", L/339.
- Haberler, G., 1950. "Some problems in the pure theory of international trade", in *Economic Journal*, June 1950, reproduced in *Readings in the Theory of International Trade*, 1961, American Economic Association.
- Hamilton, S.F. and K. Stiegert, 2002. "An empirical test of the rent-shifting hypothesis: The case of state trading enterprises", in *Journal of International Economics*, vol. 58, issue 1, pp. 135-157.

- Helpman and Krugman, 1989. *Trade Policy and Market Structure*, The MIT Press, Cambridge, MA.
- Ivanic, M. and W. Martin, 2006. "Implications of agricultural special products for poverty in low income countries", World Bank, mimeograph.
- Johnson, H.G., 1965. "Optimal trade intervention in the presence of domestic distortions", in Jagdish Bhagwati, (ed.), *International Trade*, Penguin Books 1969, pp.184-218.
- Krugman, P.R., 1990. *Rethinking International Trade*, The MIT Press, Cambridge, MA.
- Reimer, J.J. and K. Stiegert, 2006. "Imperfect competition and strategic trade theory: Evidence for international food and agricultural markets", in *Journal of Agricultural and Food Industrial Organization*, vol. 4, article 6.
- Stolper, W. and P.A. Samuelson, 1941. "Protection and real wages", in *Readings in the Theory of International Trade*, 1961, American Economic Association.
- United States Department of Agriculture, "Production, supply and distribution online". Available at <http://www.fas.usda.gov/psdonline/psdHome.aspx>.
- Van der Mensbrugge, D., 2004. "LINKAGE Technical Reference Document: Version 6.0", World Bank, Washington, D.C., mimeograph. Available at: <http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1100792545130/LinkageTechNote.pdf>.