

Reyadh Y. Faras

Kuwait University, Kuwait

THE EFFECTS OF ELIMINATING AGRICULTURAL SUPPORT ON GCC COUNTRIES

Key Words

Trade liberalization; Agriculture agreement; GCC countries; Social welfare; Import costs.

Abstract

The failure of the WTOs ministerial meeting in Cancun (2003) was attributed to disagreement over a number of trade issues among which is the issue of agricultural trade liberalization. This raised concerns about the degree of disagreement among developed and developing members of the WTO. This study contributes to the literature by examining the structure of worlds agricultural markets, the agriculture agreement, and economic literature. Then, it empirically estimates the economic effects of liberalizing the agricultural sectors globally, with an emphasis on GCC countries. The study covers the effects on six agricultural products plus total agricultural imports by GCC countries. Results show that over the projected period (2002-2011) GCC countries suffer a welfare loss of about \$10 billion and witness an increase in their imports of agricultural products by about \$2.8 billion. These significant effects were attributed to the large dependence of these countries on imported agricultural products.

Introduction

The breakdown of the World Trade Organizations ministerial meeting in Cancun (2003) was attributed to disagreement over a number of issues among which is the issue of agricultural trade liberalization. A group of 21 developing countries led by some of the developing worlds largest agricultural producers -

China, India, Brazil - demanded significant reductions in European, US, and Japanese (and other OECD countries) support for their farmers. The main argument was that rich countries subsidize their farmers by about \$300 billion a year, which makes competition unfair in agricultural markets,

and demanded the opening of markets and phasing out agricultural support.

This paper is aiming at investigating the world's agricultural trade in an attempt to analyze the validity of claims by developing countries and relate them to the WTO's agreement on agriculture. The agreement was seen by many analysts as a major achievement for developing countries during the Uruguay Round, but the benefits accrued to developing countries from it are still minimal. The paper will provide qualitative and quantitative measures of the effects of removing support on net importing countries of agricultural products in general, and GCC countries in particular. There will be measures of the effects on social welfare and costs of agricultural imports for the (2002-2011) period.

The paper is organized as follows: Section 2 reviews the agricultural balance of trade, Section 3 discusses the volume and structure of agricultural subsidies in developed countries, Sec-

tion 4 shows how the agriculture agreement dealt with subsidies, Section 5 reviews the literature on agricultural subsidies, Section 6 is where methodology and empirical assessment are given, and finally Section 7 presents the conclusions of the paper and makes recommendations for the future.

Agricultural Balance of Trade

For a country, being a net importer of agricultural products means that it would be under the mercy of foreign markets, which are subject to supply and price shocks. In addition, this means that the food bill is more expensive and creates a need to shift financial resources away from other developmental and productive activities to food imports.

The agricultural balance of trade (for cereals) for developing countries has been suffering from a deficit that increased by 412% between 1961 and 2001 from 20 million metric tons to 104 million metric tons. Even though

Table 1
Agricultural Balance of Trade (for cereals) for Developing Countries
(Millions of Metric Tons)

	1961	1971	1981	1991	2001	Growth Rate (1961-2001)
Developing Exports	10.8	20.5	31.8	38.6	64.9	501%
Countries Imports	31.2	42.2	100.2	120	169.4	443%
Trade Balance	(20.4)	(21.7)	(68.4)	(81.4)	(104.5)	-412%

Source: FAO.

their exports have increased five times, they were not enough to offset the increase in imports, which have increased by more than four times (see Table 1). This deficit means that developing countries still have to be dependent on developed countries in feeding their populations.

Unsurprisingly, the agricultural balance of trade (for cereals) for developed countries has been enjoying a surplus that increased by 409% between 1961 and 2001 from 21 million metric tons to 107 million metric tons. The surplus was supported by exports that have more than doubled; they were enough to offset the increase in imports, which have increased by 127% (see Table 2). The increase in exports was fueled by the generous support system adopted by many developed countries (e.g. CAP in EU).

Subsidies in Developed Countries

Agricultural support provided by developed countries to their farmers distorts international agricultural

markets by lowering world prices below their marginal cost and driving producers from developing countries out of the market because they cannot compete with producers from developed countries. This distortion to the market mechanism resulted in high concentration in agricultural markets as few large producers dominate the upstream and downstream industries for a number of crops.

Among the highly subsidizing countries are those who are members of the Organization of Economic Cooperation and Development (OECD). A commonly used measure of support is the Producer Support Estimate (PSE). The PSE is a measure of the annual transfers from consumers and taxpayers to agricultural producers, measured at the farm-gate level. These transfers arise from policy measures that support agriculture. The PSE includes both implicit and explicit payments, such as price gaps on outputs or inputs, tax exemptions and budgetary payments.

Table 2
Agricultural Balance of Trade (for cereals) for Developed Countries
(Millions of Metric Tons)

	1961	1971	1981	1991	2001	Growth Rate (1961-2001)
Developed Exports	70.4	101.9	208.9	207.5	219.1	211%
Countries Imports	49.3	77.8	135.1	119.5	111.8	127%
Trade Balance	21.1	24.1	73.8	88	107.3	409%

Source: FAO.

The levels of PSE in the OECD countries during the 1986-88 and 2001-03 periods are compared. The data show that the average annual PSE has declined by 1.2%, from \$241 billion to \$238 billion. Market price support (MPS) is the largest component of the PSE with shares at 77.3% and 62.4%, respectively. The MPS has declined by 20% from \$186 billion to \$148 billion, which may be attributed to the commitments of the OECD countries towards the WTO rules. The percentage of PSE (the ratio of PSE to output) has also declined by 16%, from 37% to 31% (see Table 3).

Subsidies in the Agriculture Agreement

Dissatisfaction with the GATT agreement during the Uruguay Round (UR), led to multilateral negotiations that produced an agreement specifically dealing with trade in agriculture - the Uruguay Round Agriculture Agreement (URAA). The main objective of the agreement is to eliminate distortions and make trade policies more market oriented. The URAA has three main components: market access (not discussed), domestic support, and export subsidies.

Domestic Support

The URAA divides domestic support into three categories: support

Table 3
Measures of the PSE in OECD Countries
(Billions of US Dollars)

Classifications	1986-88*	2001-03*	Change
Total value of production (at farm gate)	596.484	673.377	13%
Total value of consumption (at farm gate)	532.140	630.064	18.4%
Producer Support Estimate (PSE)	241.077	238.310	-1.2%
Market price support	186.331	148.597	-20%
Payments based on output	12.547	11.649	-7.2%
Payments based on area planted/animal numbers	15.833	34.639	119%
Payments based on historical entitlements	0.515	11.257	2160%
Payments based on input use	20.324	21.243	4.4%
Payments based on input constraints	2.993	7.242	140%
Payments based on overall farming income	2.253	3.486	55.5%
Miscellaneous payments	0.281	0.197	-30%
Percentage PSE	37%	31%	-16.2%

Source: OECD.

* Numbers are annual averages for the specified periods.

with no, or minimal, distortive effect on trade “Green Box”, trade-distorting support “Amber Box”, and measures in between “Blue Box”.

Green Box: The URAA defines a number of criteria which allow support measures to be included in the Green Box (Annex 2 of the URAA). These measures are exempt from reduction commitments and even can be increased.

Blue Box: Direct payments under production limiting programs “Blue Box” are exempt from commitments if such payments are made on fixed areas and yield or a fixed number of livestock. Such payments also fit into this category if they are made on 85% or less of production in a defined base period.

Amber Box: Support measures that do not fit into any of the above exempt categories are subject to reduction commitments. Under the de minimis provisions of the URAA there is no requirement to reduce support if it does not exceed 5% of the total value of production for developed countries and 10% for developing countries. Reduction commitments are expressed in terms of a “Total Aggregate Measurement of Support” (Total AMS) which includes all support in one single figure. Members with a Total AMS have to reduce base period support by 20%

over 6 years (developed countries) or 13% over 10 years (developing countries).

Export Subsidies

Export subsidies are defined as subsidies contingent on export performance (Article 9) and are subject to reduction commitments, expressed in terms of both the volume of subsidized exports and the budgetary outlays for these subsidies. Developed countries are obliged to reduce the volume of subsidized exports by 21% and the corresponding budgetary outlays for export subsidies by 36%, in equal annual steps over a period of 6 years. In the case of developing countries, the required reductions are 14% over 10 years with respect to volumes, and 24% over the same period with respect to budgetary outlays.

Literature Review

A great deal of work was produced in the literature since the early 1990s in quantifying the economic effects of the UR agreements in general, and the URAA in particular. Studies have measured the effects on prices, trade, production, and welfare. Work was carried out by many professional groups including international organizations, research institutes and academics. Model specification varies across studies; also there exists much great variation in policies analyzed

and products covered. In general, results (regarding the URAA) show that trade and production will expand, prices will moderately increase, and the effects on welfare are ambiguous depending on the country's position as net exporter or net importer of food and level of support it currently applies. Results are summarized in Tables 4 - 8.

Many policymakers and academics have raised concerns about the effects of enforcing the URAA

on prices of agricultural products, which certainly will hurt poor net-importers of food. Such concerns were strongly used by developed countries in their defense of their support systems during trade negotiation rounds. Table 4 shows that liberalization by developed countries only results, on average, in higher prices than a global liberalization (Table 5). Dairy products have the largest increase in prices because they are highly protected in developed countries.

Table 4
Effects on Food Prices of Liberalization by Developed Countries

(In Percentage)

Study	Wheat	Course Grains	Rice	Meat	Dairy	Sugar
Zietz/Valdes	3	-3	2	10	-	15
OECD/MTN	-5	-10	-	5	31	9
USDA/SWOPSIM	27	16-22	18	16	84	29
UNCTAD/WIDER	20	12-15	43	13	-	27
UNCTAD/ATPSM	40	18-28	50	20-41	61	39
IIASA	18	11	21	17	31	-
RUNS	15	8	14	18	-	57
WALRAS	17	-	-	10	14	-

Source: Trela (1998)

Table 5
Effects on Food Prices of Global Liberalization

(In Percentage)

Study	Wheat	Course Grains	Rice	Meat	Dairy	Sugar
Zietz/Valdes	-12	-24	-21	13	-	1
OECD/MTN	-7	-12	-5	-4	29	7
USDA/SWOPSIM	23	8-19	-	7	79	7
IIASA	23	13	-	11	34	-
Tokarick	3.9	3.1	2.3	22.2	23.6	8
FAPRI	4.8	-	10.3	3.8	25.6	-

Source: Trela (1998), Tokarick (2003), and FAPRI (2002)

Another concern about liberalizing the agricultural industry is the negative effects on social welfare (i.e. foregone income), especially for poor net importing countries. Welfare loss occurs as a result of loss of support received by farmers, especially in developed countries, and higher prices paid by consumers, especially in poor countries. Such concern is understood in the short run because adjustment will take some-time before markets get used to the new structures of production and trade, which will witness the entry and exit of a large number of producers. However, in the long run everyone will enjoy the fruits of free-competitive-efficient agricultural markets.

Empirically, results of all studies (regardless of liberalization scenario) show that liberalization is welfare-improving for the world as a whole. As expected, a global liberalization produces higher welfare gains (Table 7) than liberalization by developed countries only (Table 6). Such a result may be explained as follows: elimination of support in developed countries increases world prices (as shown above), which hurts consumers in developing countries that use import tariffs. Thus, eliminating tariffs and other import restrictions will lower prices paid by consumers and raises welfare.

Table 6
Effects on Welfare of Liberalization by Developed Countries

(Billions of US Dollars)

	USA	EU	OECD (Developed)	Developing	Middle East	World
Krissof <i>et al.</i> (1990)			33.1	-4.9	-2.6	28.1
Anderson <i>et al.</i> (1993)			46.5	16.6	-2.6	62.2
Brandao <i>et al.</i> (1993)	12.5	33.8	72.7	0.63	-3.03	78.4
					(oil exporters)	
Tokarick (2003)	6.2	31.8	91.7	8.01	-1.9	99.7

Source: Trela (1998) and Tokarick (2003)

Table 7
Effects on Welfare of Global Liberalization

(Billions of US Dollars)

	USA	EU	OECD (Developed)	Developing	Middle East	World
Krissof <i>et al.</i> (1990)			33.1	20.6	-23.9	35.1
Anderson <i>et al.</i> (1993)			73.3	33.4	-0.2	106.4
Brandao <i>et al.</i> (1993)	13.1	30.7	73.4	59.2	3.2	139.1
					(oil exporters)	
Tokarick (2003)	7.9	32.8	97.8	30.4	9.04	128.2

Source: Trela (1998) and Tokarick (2003)

Table 8
Increase in Import Costs of Some Middle Eastern Countries as a Result
of Removing Agricultural Support in Developed Countries.
(Millions of US Dollars)

Yemen	Egypt	Jordan	Lebanon	Saudi Arabia	Syria	Tunisia	U. Arab Emirates
8.34	5.92	6.73	8.23	35.43	4.19	3.67	13.15

Source: Tokarick (2003)

Disaggregating the world into different country groups show that welfare is not improving for everyone. The largest gainers are developed countries which reap most of the gains compared to developing countries. Such gains mainly come from increases in consumer surplus (due to lower domestic prices in developed countries) that outweigh losses in producer surplus (due to lower producer prices and lower output). The increase in welfare in developing countries is not unexpected because most of them are producers of agricultural products and will enjoy increases in the value of their exports which offset either partially (for net

importers) or completely (for net exporters) the increase in the value of their imports. This justifies the welfare loss accruing to Middle Eastern countries (found by most studies), which are all net importers of food (see Table 8 for the increase in import costs for some Middle Eastern countries)

The only study that investigated the effects of trade liberalization in agriculture on GCC countries individually, among 143 countries, is the one by Hoekman, Ng, and Marcelo (2002). The study compared the effects of cutting import tariffs by 50% with a similar cut in domestic support (DS)

Table 9
Welfare Effects of a 50% Cut in Tariffs and Domestic Support on GCC Countries
(US Dollar per capita)

	Change in Welfare	
	50% Tariff Cut	50% Domestic Support Cut
Bahrain	-4.4	-0.6
Oman	-4.6	-1.2
Qatar	0.1	0.0
Kuwait	0.1	0.0
Saudi Arabia	-4.1	-1.1
United Arab Emirates	2.8	0.6
Total	-10.1	-2.3

Source: Hoekman, Ng, and Marcelo (2002).

on a number of trade indicators, among which is welfare. Table 9 shows that the welfare loss due to the tariff cut (for the GCC as a group) is about four times larger than that of the domestic support cut (\$10.1 vs. \$2.3), which is consistent with the overall results found in the study.

This shows that tariffs have a higher distortionary effect on welfare and other trade indicators (e.g. terms of trade, import revenues and export revenues). Unfortunately, the study does not calculate the effects of a cut in export subsidies, which is expected to have a larger effect than DS. The variation in welfare effect on GCC countries may be attributed to three variables: the applied tariff rate (average of period 95-98) on agricultural imports (which ranges from zero in Kuwait to 11% in Saudi Arabia), the share of supported exports (which ranges from zero in Kuwait to 4.9% in Qatar), and the share of supported imports (which ranges from 2.3% in Qatar to 6.3% in Saudi Arabia).

Assessment of Effects on GCC Countries

Methodology

Welfare Effects

A widely used approach in the international trade literature to measure the welfare effect of tariffs is the balance of trade function approach,

which is derived from the income-expenditure identity. For derivations and applications of the expenditure function see Marion and Svensson (1986), Llyod and Schweinberger (1988), Vousden (1990), and Thurman (1993). Below we derive a measure of the welfare effect that results from a change in either/both tariff rates and/or world prices. The derivation is based on the expenditure and the balance of trade functions.

$$E(P,u) = \min \{PC:U(C) = u\}$$

Where P is domestic price, C is consumption, and U is the utility function.

The economy's budget constraint is:

$$E(P,u) = R(P,v) + (p-p^*)IM$$

Where R is the revenue function, p^* is world price, and IM are imports.

After some algebraic manipulations, we obtain the following measure of welfare change:

$$WL = -IM(dP^*/P^*) + \tau \eta^C IM(dP/P)(1)$$

Where WL is the real welfare loss η^C is the compensated price elasticity of demand for imports and τ is the tariff rate.

Equation (1) provides an exact measure of the welfare effect that results from a change in the world price of the importable good or a change in the tariff rate. For example, a percentage change in the tariff rate is

captured by the percentage change in the domestic price (dP/P). However, a percentage change in the world price is captured by changes in both, the percentage change in the world price term (dP^*/P^*) and the percentage change in domestic price term (dP/P). The latter effect results from the price transmission assumption, which comes from the assumption that the small country is a price taker; therefore, the domestic price must equal the world price.

Changes in Costs of Agricultural Imports

The change in import costs for country (i) is measured by multiplying the change in world price by import demand elasticity and the quantity of net imports of each product (Tokarick, 2003). This can be obtained directly from the definition of the elasticity of demand for imports as follows:

$$\eta^c = (d \text{ IM} / \text{IM}) / (dP^*/P^*)$$

Solve for rate of change in imports:

$$d \text{ IM} / \text{IM} = -\eta^c (dP^*/P^*) \quad (2)$$

or the change in the value of imports:

$$d \text{ IM} = -\eta^c (dP^*/P^*) \text{ IM} \quad (3)$$

Note: a (-) sign was added because (η^c) is negative; this will make the increase in price result in an increase in the costs of imports.

Assumptions and Scenarios

A. Assumptions

Few assumptions were used in the analysis of the effects of globally liberalizing the agricultural industry on the GCC countries in terms of welfare loss and the increase in the costs of importing agricultural products. First, import data used in the analysis were for the year 2002, and they were assumed to remain unchanged during the (2002-2011) period (see Table 10). However, imports were allowed to change only in response to changes in world prices. Second, projections of

Table 10
GCC Countries Agricultural Imports in 2002

(Millions of US Dollars)

	Wheat	Corn	Rice	Cheese	Beef	Cotton	All Agriculture
Bahrain	9.914	2.695	21.076	16.805	1.897	14.748	558.714
Kuwait	30.594	11.853	57.55	35.27	2.137	0.036	811.457
Oman	42.282	4.519	51.366	2.387	4.664	0.059	1257.023
Qatar	7.303	0.178	17.148	3.04	0.596	0.036	479.949
Saudi Arabia	0.547	144.71	321.486	70.135	6.728	1.327	5141.5
U. Arab Emirates	94.531	65.625	221.977	44.025	2.826	3.172	3147.163
GCC	185.17	229.58	690.6	171.66	19.028	19.378	11396

Source: FAO

baseline prices (see Table 11) and price changes (see Table 12), in response to liberalization, were obtained from the Food and Agriculture Policy Research Institute (FAPRI, 2002), which is a prominent agriculture research institution in the United States. Third, the only protection policy in GCC countries is assumed to be import tariffs (i.e. no domestic support or export subsidies).

Fourth, GCC countries (even as a group) were assumed to be price takers of agricultural products. Finally,

price elasticity of import demand is assumed to be (-0.3), which reflects an inelastic demand for imports of agricultural products.

B. Scenarios

The analysis of welfare effect is conducted under two scenarios. The first involves a global liberalization that does not include GCC countries, where GCC countries only response is changing their levels of imports (i.e. they keep their import tariffs at 5%). The second features a global liberalization that includes

Table 11
Baseline Prices Projections

(US Dollars per Metric Tons)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Wheat	130.98	133.09	137.41	138.1	142.66	144.79	148.05	150.12	154.39	156.22
Corn	99	101	103	104	105	107	108	110	111	113
Rice	180.64	185.84	191.3	196.88	202.25	207.69	213.35	219.1	225.17	231.57
Cheese	2051	2108	2165	2202	2221	2266	2334	2392	2445	2497
Beef	1641	1684	1730	1681	1613	1545	1506	1481	1507	1543
Cotton	837	911	983	1041	1091	1143	1200	1258	1317	1378

Source: FAPRI (2002)

Table 12
Price Changes due to Liberalization

(Percentages)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Average
Wheat	2.9	4.16	4.45	5.39	4.32	5.34	4.63	5.37	5.12	5.97	4.77
Corn	5.06	2.67	5.34	5.02	5.73	5.85	6.21	6.45	6.97	7.42	5.67
Rice	7.38	11.01	9.98	11.09	10.19	10.94	10.49	10.71	10.46	10.91	10.32
Cheese	24.91	27.47	22.13	21.45	22.85	22.71	21.22	20.59	20.25	19.88	22.34
Beef	8.87	9.65	10.61	7.54	2.26	-1.05	-2.26	-1.3	0.53	2.84	3.77
Cotton	1.25	16.95	17.83	16.32	14.63	12.84	11.09	9.4	7.8	6.33	11.44
Average	8.4	12	11.72	11.14	11	9.44	8.56	8.54	8.52	8.9	9.71

Source: FAPRI (2002)

GCC countries that cut import tariffs from 5% to zero.

Estimation Results

Welfare Effects

Scenario One

Under this scenario GCC countries do not participate in the global liberalization (i.e. keep their tariffs unchanged). Estimation results show a significant welfare loss, especially for all agricultural products for GCC countries ranging from \$443 million for Qatar to \$4,744 million for Saudi Arabia, and \$10,515 million in total over a ten year period (2002-2011). For individual products, rice produces the highest welfare loss of \$640 million, while beef produces the lowest (\$7million). It should be noted that the size of the welfare loss depends on the volume of the imported product and

the projected change in world price resulting from liberalization.

Scenario Two

Under this scenario GCC countries liberalize their trade by eliminating import tariffs on agricultural products. This reduces the welfare loss equation by eliminating the second term as (τ) equals zero. Therefore, the only source of welfare loss is the change in terms of trade $(-IM(dP^*/P^*))$. Theoretically, this should reduce the size of welfare loss because it reduces domestic prices; however, empirically it reduced it only by about 1.5% or \$155 million. This result may be attributed to the low applied tariff rate (5%) and the low import elasticity (-0.3). Such a finding shows that GCC countries will not benefit a lot from eliminating tariffs.

Table 13
Effects on Welfare in GCC Countries of a Global Liberalization
Excluding GCC Countries (2002-2011) (Scenario 1)

(Millions of 2002 US Dollars)

	Wheat	Corn	Rice	Cheese	Beef	Cotton	All Agri
Bahrain	-4.35	-1.44	-19.45	-34.77	-0.704	-13.25	- 515.5
Kuwait	-13.44	-6.33	-53.1	-72.98	-0.8	-0.032	- 748.8
Oman	-18.57	-2.41	-47.4	-4.94	-1.73	-0.053	- 1160
Qatar	-3.21	-0.095	-15.82	-6.3	-0.22	-0.032	- 442.9
Saudi Arabia	-0.24	-77.286	-299.1	-145.12	-2.5	-1.193	- 4744.3
U. Arab Emirates	-41.52	-35.05	-204.83	-91.1	-1.5	-2.85	- 2904
GCC	- 81.33	- 122.6	- 639.75	- 355.2	- 7	- 17.4	-10515.5

Source: Authors calculations

Costs of Imports

As many studies have shown, liberalization of agricultural sectors will increase import costs for net importing countries because of the expected increase in agricultural prices. The estimated results in this study confirm the above claim. The increase in import costs varies by countries and

products. For example, Saudi Arabia (the largest importer) has the largest increase in costs (\$1.4 billion), while Qatar (the smallest importer) has the smallest increase (\$131 million). Regarding products, the largest increase is in the costs of rice (\$189 million), while the smallest is for beef (\$2.1 million).

Table 14
Effects on Welfare in GCC Countries of a Global Liberalization
Including GCC Countries (2002-2011) (Scenario 2)

(Millions of 2002 US Dollars)

	Wheat	Corn	Rice	Cheese	Beef	Cotton	All Agri
Bahrain	-4.3	-1.42	-19.2	-34.26	-0.69	-13.06	- 508
Kuwait	-13.24	-6.24	-52.3	-71.9	-0.78	-0.032	- 737.7
Oman	-18.3	-2.38	-46.7	-4.87	-1.71	-0.052	- 1142.8
Qatar	-3.16	-0.09	-15.6	-6.2	-0.22	-0.032	- 436.3
Saudi Arabia	-0.236	-76.14	-294.7	-142.97	-2.46	-1.17	- 4674.2
U. Arab Emirates	-40.91	-34.53	-201.8	-89.75	-1.03	-2.8	- 2861
GCC	- 80.2	- 120.8	- 630.3	- 350	6.88	- 17.16	- 10360

Source: Authors calculations

Table 15
Changes in Import Costs in GCC Countries due
to a Global Liberalization (2002-2011)

(Millions of 2002 US Dollars)

	Wheat	Corn	Rice	Cheese	Beef	Cotton	All Agri
Bahrain	1.3	0.43	5.75	10.3	0.21	3.9	152.4
Kuwait	3.9	1.9	15.7	21.6	0.23	0.01	221.3
Oman	5.5	0.7	14.01	1.5	0.5	0.02	342.8
Qatar	0.95	0.03	4.68	1.9	0.07	0.01	130.9
Saudi Arabia	0.07	22.84	88.4	42.9	0.74	0.35	1402.3
U. Arab Emirates	12.3	10.4	60.5	26.9	0.31	0.84	858.3
GCC	24.05	36.26	189.0	105	2.1	5.15	2835

Source: Authors calculations

Conclusions and Recommendations

Conclusions

The creation of a strong group of agricultural exporters by developing countries "Group 21" that fight for the elimination of support measures in developed countries is a great achievement. It will make it difficult for rich countries to pass any new trade topics (e.g. the Singapore issues) during incoming trade negotiations, without solving current disagreements on current issues such as agricultural support.

As this study has shown, there will be gainers and losers from liberalizing trade in agriculture within developed and developing countries. In developed countries consumers will gain as prices go down, while producers will lose as their incomes decline. In developing countries the situation is just the opposite; consumers lose as world prices go up, while producers gain as their incomes increase as a result of the expected increase in their exports as markets become less distorted. However, the net effect on a country (or a group of countries) depends on its balance of trade in agricultural products; net exporters would gain while net importers would lose. Finally, the study has conducted a quantitative analysis of the potential effects of liberalization on the countries of the Gulf Cooperation Council

(GCC), which represent net importers countries. The results show that over a ten year period (2002-2011), GCC countries will be negatively impacted in terms of a social welfare loss and an increase in costs of imports. The magnitude of the loss depends on the volume of imports by each country and the expected increase in the price of a given commodity.

Recommendations

1. GCC countries are required to increase their support for developing countries in order to strengthen the negotiation position of the latter and have their support in the future when negotiating issues of importance to GCC countries.
2. To minimize welfare losses, GCC countries should work on reducing the deficit in their agricultural trade balance.
3. GCC countries need to increase their investments in agricultural sectors in developing countries that are considered traditional agricultural producers. This makes them enjoy the fruits of higher potential profits in agricultural sectors and enables them to diversify their sources of income.
4. GCC countries need to strictly enforce the antidumping agreement reached in their (2003) summit to protect their farmers from

- dumped products by other countries.
5. Privatization and liberalization should be adopted in agricultural sectors to increase the competitiveness of GCC products in domestic and international markets.
6. GCC producers have to increase the sizes of their farms and processing facilities to take advantage of the economies of scale, which reduces the average cost of their products and makes them more competitive.

References

- Food and Agriculture Organization. Agriculture Statistics. www.fao.org <<http://www.fao.org>>.
- Food and Agricultural Policy Research Institute. 2002. The Doha Round of the World Trade Organization: Appraising Further Liberalization of Agricultural Markets. Working Paper 02-WP 317, (November).
- Hoekman, B, F. Ng, and O. Marcelo. 2002. Reducing Agricultural Tariffs versus Domestic Support: What's More Important for Developing Countries? Washington: World Bank Working Paper 2918 (October).
- International Monetary Fund. International Financial Statistics.
- Lloyd, P. and A. Schweinberger. 1988. Trade Expenditure Functions and the Gains from Trade. *Journal of International Economics*, 24: 275-97.
- Marion, N. and L. Svensson. 1986. The Terms of Trade Between Oil Importers. *Journal of International Economics*, 20: 99-113.
- OECD. 2000. The Uruguay Round Agreement on Agriculture: The Policy Concerns of Emerging and Transition Economies.
- OECD. 2002. Methodology for the Measurement of Support and Use in Policy Evaluation.
- OECD. Trade Statistics.
- Thurman, W. 1993. The Welfare Significance and Nonsignificance of General Equilibrium Demand and Supply Curves. *Public Finance Quarterly*, 21: 449-69.
- Tokarick, S. 2003. Measuring the Impact of Distortions in Agricultural Trade in Partial and General Equilibrium. International Monetary Fund Working Paper WP/03/110.
- Trela, I. 1998. Agricultural Trade Liberalization in the Uruguay Round: Implications for Developing Countries. In *Uruguay Round Results and the Emerging Trade Agenda: Quantitative-based Analyses from the Development Perspective*. UNCTAD.
- Vousden, N. 1990. *The Economics of Trade Protection*. Cambridge: Cambridge University Press.

الملخص

تأثير إلغاء الدعم الزراعي على دول مجلس التعاون الخليجي

رياض يوسف فرس

جامعة الكويت

تم إرجاع فشل المؤتمر الوزاري الخامس لمنظمة التجارة العالمية الذي عقد في مدينة كانكون (٢٠٠٣) إلى خلافات عميقة بين مجموعتي الدول المتقدمة والنامية على مجموعة من الموضوعات التجارية. من أهم هذه الموضوعات موضوع تحرير التجارة في المنتجات الزراعية. وقد أثار هذا الفشل المخاوف عن مدى الخلافات بين كل من الدول النامية والدول المتقدمة الأعضاء في المنظمة. وتسهم هذه الدراسة في أدبيات تحرير التجارة الزراعية من خلال دراسة هيكل الأسواق الزراعية العالمية، واتفاقية الزراعة، وأدبيات الرفاهية الاقتصادية. كذلك تقدم الدراسة تقديرات كمية تعلق بالآثار الاقتصادية لتحرير القطاعات الزراعية عالمياً، مع التركيز على دول مجلس التعاون الخليجي. وتغطي الدراسة ستة منتجات زراعية تستوردها دول المجلس، بالإضافة إلى المنتجات الزراعية إجمالاً. وقد بينت النتائج للفترة محل الدراسة (٢٠٠٢-٢٠١١) أن دول المجلس سوف تتكبد خسارة حقيقية في الرفاهية الاجتماعية تصل إلى حوالي عشرة مليارات دولار أمريكي (بأسعار ٢٠٠٢)، بالإضافة إلى ارتفاع تكاليف وارداتها الزراعية بقيمة ألفين وثمان مئة مليون دولار. وقد تم إرجاع هذه الآثار الكبيرة نسبياً إلى الاعتماد الكبير لدول المجلس على الواردات الزراعية.

Reyadh Y. Faras (Ph. D. in Economics, West Virginia University, USA, 2002) Assistant Professor, Department of Economics, College of Business Administration, Kuwait University, Kuwait. Areas of interest: Public Finance, International Trade, Welfare economics, and Monetary Theory.