



Munich Personal RePEc Archive

**A partial equilibrium analysis of India's
agricultural export to GCC: looking
beyond the status quo(2009-2015)**

Ayyub, Salahuddin and Manral, Prerana

Indian Institute of Foreign Trade, Centre for WTO Studies

July 2017

Online at <https://mpra.ub.uni-muenchen.de/84365/>

MPRA Paper No. 84365, posted 07 Feb 2018 10:04 UTC

A Partial Equilibrium Analysis of India's Agricultural Export to GCC: Looking Beyond the Status Quo (2009-2015)

Salahuddin Ayyub* & Prerana Manral **

Abstract: *India and GCC countries have very strong trade relation; 50 percent of India's energy sources are extracted from GCC and India is the biggest exporter to GCC after China. GCC is India's largest trading partner with over \$137 billion trade and still growing at a steady pace. India's strength in the agriculture sector has a lot of potential to fill the demand for food products in the GCC as GCC fulfills 60 to 90 percent of its food demand through imports. Currently GCC imports 12 percent of its Agriculture products from India and 17 percent of India's agriculture exports go to GCC alone. Agriculture products have a very strong presence in the Indian export basket to GCC; more than 40 percent of Bahrain and Kuwait's import from India is only in the Agriculture products. An effort has been made in this paper to understand the trend and pattern of India's Agriculture export to GCC with the help of Descriptive Statistics and to find out the impact of tariff reduction on India's agriculture export to GCC Partial Equilibrium Analysis (Smart Analysis) has been used and BRCA has been used to find out the agriculture products where India has comparative advantage in GCC import market and to make a comparative analysis of GCC countries as a destination of India's agriculture export. It has been found that India's agriculture export has a lot of potential if tariff are reduced in the GCC and Top ten products represent most of the export change as a result of tariff reduction. Coconuts, Brazil nuts and cashew (0801) and Meat of bovine animals, frozen (0202) alone represent around 50% of export change. In case of zero tariff in GCC, India's agriculture export will see highest growth in Saudi Arabia (\$106 Million) followed by UAE (\$89 Million), Kuwait (\$40 Million), Qatar (\$23 Million), Oman (\$22 Million) and Bahrain (\$6 Million). Out of 231 agriculture products, India has highest average number of products with BRCA in Qatar (76), followed by Oman (74), Kuwait (67), Bahrain (59), UAE (52) and Saudi Arabia (28).*

Keywords: India, GCC, Agricultural Export, Smart Analysis, Partial Equilibrium

Background: The Cooperation Council for the Arab States of the Gulf (GCC) is a regional inter governmental political and economic union consisting of six Arab states of the Persian Gulf; Kingdom of Saudi Arabia (KSA), United Arab Emirate (UAE), Bahrain, Qatar, Oman and Kuwait. With a total population of approximately 40 million, of whom 40 percent are foreign workers, GCC is the world's most food deficient region, importing 60 to

*Research Fellow at the Centre for WTO Studies, IIFT, New Delhi

** Research Associate at the Centre for WTO Studies, IIFT, New Delhi

90 percent of their food requirements. On the other hand, GCC is endowed with oil and gas reserves estimated at some USD 35 trillion² and happened to be among the countries with highest per capita income.

India is as a major agricultural exporter, with exports rising from just over \$5 billion in 2003 to a record of more than \$30 billion in 2015. India had become the world's seventh-largest exporter of agricultural products in 2013 after touching the figure of \$40 billion, surpassing Australia.

India-GCC relationship has been intensifying since decades. The scope for interaction between the people of India and GCC started when they crossed Arabian Sea for trade and commerce. From the historical era both countries enjoy a continuous bond. The movement of people led to the spread of culture and language. This played underpinning for strong India-GCC relationship. India's growing demand for energy for the industrialization and GCC's demand for food and human resources led to the strong economic relations and prepared grounds for further bilateral trade and investment. Today GCC is India's largest trading partner with over \$137 billion trade and still growing at a steady pace. GCC imports 12 percent (2015) of its Agriculture products from India and 17 percent (2015) of India's agriculture exports go to GCC alone. Agriculture products have a very strong presence in the Indian export basket to GCC; more than 40 percent of Bahrain and Kuwait's import from India is only in the Agriculture products. Moreover, ongoing infrastructure developments in GCC are employing more Indians and giving India more opportunity to go for economic enhancement. There is an absolute mushrooming of Indian Diasporas in the GCC. Around 7 million Indians are living in the GCC countries. There is an increase in remittances from India Diaspora to about \$38 billion out of total 70\$ billion.³

While India has a substantial importance for the domestic agriculture, GCC has its focus on uninterrupted food supplies. Indian government advocates both for production and

² Shah, Mahendra. (2010) "Gulf Cooperation Council food security: balancing the equation", Springer Nature, Macmillan Publishers Limited, Published online 25 April 2010.

³ ibid

exports for agricultural products.⁴ In the recent years the gap between the agricultural production and consumption of GCC has widened. There is technological challenge to increase its agricultural production due to shortage of land and water resources. India has its large population dependent on agriculture which can enhance gains through increased foreign exchange earnings by exporting agricultural goods to GCC.

The India-GCC alliance has been extended to political, economic, strategic and cultural gravity. India pertains traditional and friendly bond with all the GCC countries. Now, their relation stands on a bigger platform where GCC countries are moving ahead with economic integration and promoting potential for cooperation in trade, investment, energy, manpower etc. There is huge potential in the field of investment through FII and FDI. India extracts its 50 per cent crude oil import demand from GCC. Oil blocks in Qatar and Oman has been bid by India which is giving synergy to economic growth and energy security. There is tremendous cooperation in the realm petrochemicals, fertilizers and energy intensive industries. In the last few years many agreements and MoUs have been signed which have given pace to intensified engagement between the two.

India has been pushing for stronger economic ties between India and GCC countries for decades now; former Indian Prime Minister, Dr. Manmohan Singh stated on September 26, 2003 while chairing the Trade & Economic Relations Committee at UNGA, "The Gulf region, like South-East and South Asia, is part of our natural economic hinterland. We must pursue closer economic relations with all our neighbours in our wider Asian neighborhood". Recently, Indian External Affairs Minister, Ms. Sushma Swaraj held talks with her counterparts from the Gulf Cooperation Council (GCC) in October, 2015 whose nations she said were "an extended part of our neighbourhood"⁵. Ms. Sawaraj also called for early finalization of the India-GCC Free Trade Agreement and operationalising the India-GCC Framework Agreement.

The first India-GCC Industrial Conference comprising ministerial and business delegations from the six member states of the GCC and India was held in Mumbai in February 2004. The

⁴ International Agricultural Trade Report, August 2014, Foreign Agriculture Service, United States Department of Agriculture.

⁵ The Hindu, Oct 1, 2015

conference issued a 'Mumbai Declaration' and focused on trade, investment, industrial and technological cooperation. In March 2006, second India-GCC Industrial Conference took place in Muscat-Oman and in May 2007, third conference took place in Mumbai with a focus on two way investment. This conference was concluded by giving room for further cooperation in field of industry and investment by conducting Senior Officials Meeting (SOM) regularly. A Framework on Economic Cooperation was signed between India-GCC on August 25, 2004 to explore possibility for free trade. There were negotiations by a three member committee towards a FTA and non-tariff barriers that will affect exports to GCC by India. In January 2009 at Riyadh third round of negotiations was held. The second India-Arab investments project conclave was organized by FICCI from 8-9 February 2010 at New Delhi where Nine Trade and Industry Ministers and over 280 delegates from 21 GCC and Arab countries and Iraq comprising Government officials, business leaders and investment houses participated. The idea behind this conclave was to enhance investment and business relations between India and GCC.

India is considered to be the most important player in the GCC after China. Currently China is paving its trade ties with GCC on the lines of FTA agreement which is scheduled to be finalized by end of 2016. India should gain momentum in chasing the FTA route to maintain its position and harness its trade potential with GCC in future.

Literature Review:

Many of the research papers dealt with the India-GCC trade potential and concluded that there is tremendous potential in increasing food and agricultural exports to GCC countries (Pradhan 2010, Woertz, 2010 and Intini, et al. 2012). Growing demand for agriculture product in the GCC market has also been explained by some studies; in the recent year's food gap in the GCC has increased due to growing populations (Pradhan, 2010). Food imports has reached to 60-90 per cent of food consumption in the GCC and by 2020 population is expected to reach 53.4 million by making at least one fifth of the people in Bahrain, Oman, Qatar and Saudi Arabia food insecure (Intini et al. 2012).

There are some studies which analysed the nature of India-GCC trade; import basket of GCC is highly diversified and not concentrated on fewer goods. Meat & edible offal of poultry

meat cereals such as rice and barley, cane or beet sugar and processed tobacco products such as cigars, cheroots, cigarillos & cigarettes are the major agricultural product groups. More than 50 percent of the imports are contributed to diverse range of products (Houcine Boughanmi, Sarath Kodithuwakku and Jeevika Weerahewa, 2014).

RCA Analysis shows that at one digit level India has a revealed comparative advantage, but they are relatively weak with RCA values of less than 3. India has a strong RCA in products such as Rice, and Gold / Silverware / Jewellery. The analysis evince that despite India having enormous export potential, it has not achieved the desired results. Feasible export products are identified which are not exported to Gulf region. The paper concludes that there are diversified potential exports sectors on which India should focus to enhance its trade reach. India and the Gulf countries can benefit from each other by specializing from bilateral trade liberalization. (Das & Pradhan, 2014).

Using Gravity Model it was found that coefficient per capita income of the trade partner is quite low among the top ten world oil exporters, Saudi Arabia, Kuwait and the UAE which signifies that the exporting commodities has an inelastic demand and are not affected by income fluctuations in the importing country. Distance Variable is used in the analysis and it states that there is a negative relation with trade. This is also influenced by the geographical conditions and the characteristics of the main commodities. The export focus is on relatively richer countries like Japan, South Korea, and the US, where the transportation cost and distance criteria are not taken into consideration. GCC import basket mainly consists of high-tech commodities like machinery and mechanical appliances vehicles, electrical machinery and equipment, are imported from the developed countries, such as the US, Japan, EU, S. Korea, as well as from the developing countries, namely China, India, Thailand (Aysu Insel and Mahmut Tekçe, 2009).

One of the major factors influencing India-GCC trade relation is that around 6.5 million South Asians residing in GCC countries that is 17 per cent of the total resident population of GCC. The structural changes in the food consumption patterns and increase in food demand from GCC is greatly influenced by the immigrants from India. Those immigrants have a significant effect on the trade relations between India and GCC (Karayil, 2007).

Bilateral trade and mutual interdependence between India and GCC has increased. But Bahrain and Oman shows lower trade patterns (RigiLadez & Khan, 2014). The main suppliers of rice, wheat, sugar, and live animals to the GCC region are countries like India, Pakistan, Bangladesh, and Sri Lanka (Pradhan, 2010).

In contrast to the above positive findings supporting India-GCC trade relations there are certain impediments to the growing trade relations. The trade scenario is focused on consumption patterns and import basket serving to the South Asian expatriates living in the GCC and GCC's energy exports to the subcontinent (Pradhan, 2010 and Karayil, 2007). Further, GCC experience structural barriers while exporting to South Asia in general and India in particular while exports from South Asia face a nominal duty of 5 percent and in many cases a lower rate ranging from 1.5 percent to 2 percent in the GCC (Pradhan, 2010).

Literature is either dealing with the reasoning of high trade volumes, nature of trade, potential of overall trade, and trade barriers. There are very few studies on India-GCC trade relations specifically for agriculture sector and no study could be found which deals with the effects of reduced tariffs on exports. The objectives of this paper are;

- To understand the trend and pattern of India's Agriculture export to GCC
- To find out the impact of tariff reduction on India's agriculture export to GCC
- To find out the agriculture products where India has comparative advantage in GCC import market
- To make a comparative analysis of GCC countries as a destination of India's agriculture export

Pattern of India's Total Exports to GCC:

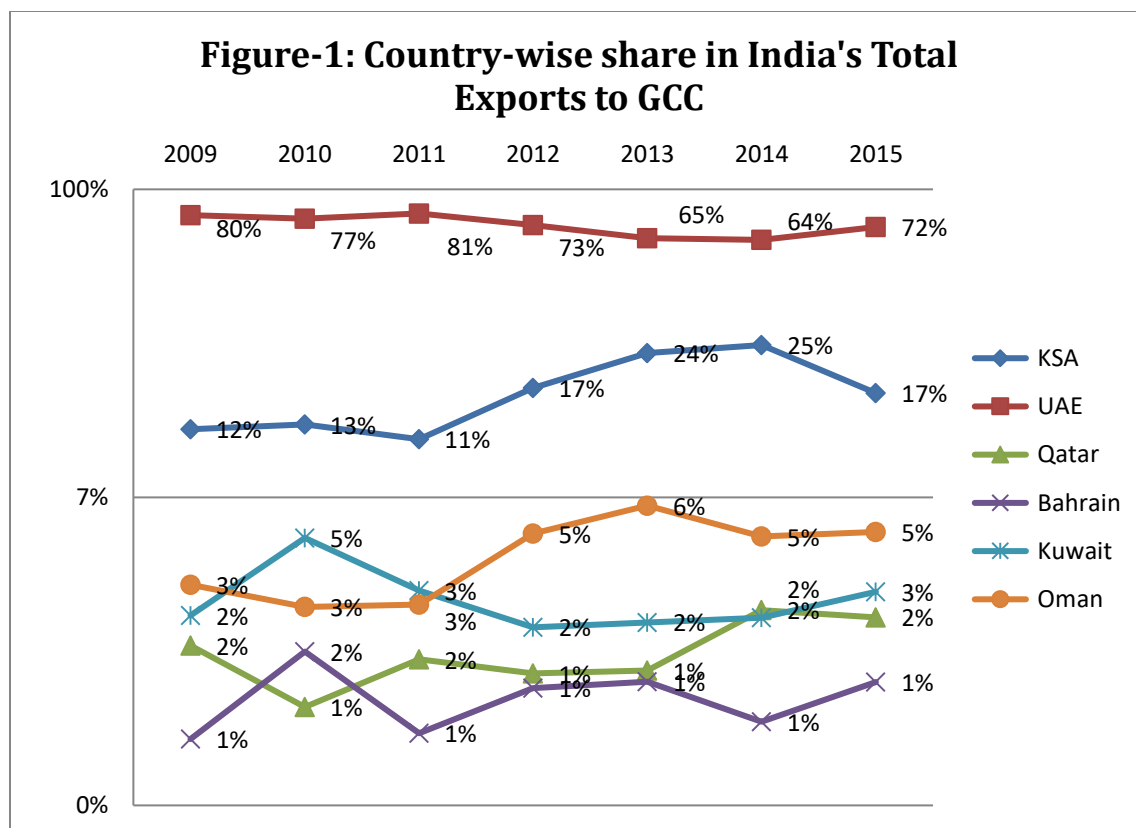
Out of India's total exports to the world, quite stable share of 15 to 18 percent is destined just for the GCC countries during the period 2009-2015 as may be seen in the Table No.1 UAE has the largest share of India's total exports to GCC with 64 percent to 81 percent. India's second destination in the GCC is Kingdom of Saudi Arabia (KSA) as it has a good presence in the KSA's import market with around 10 to 25 percent share in the total imports of the kingdom. India's share in the KSA's total imports has grown in recent years

from 12 percent in the year 2009 to 25 percent in the year 2014 and then a sharp drop in the next year to 17%. India's share in the rest of the four GCC countries' imports is below 5% with lowest in Bahrain at around 1 percent and highest in Oman at around 5 percent in the recent years as depicted in the Figure No. 1 UAE's dominance in the India's exports basket to the GCC is mainly due to the fact that most of India's exports to the UAE is re-exported to other destinations in the Middle Eastern and African countries. According to Shayah & Qifeng, (2015), "The UAE is the world's third-largest re-export market (trailing only Hong Kong and Singapore)"⁶.

Table-1: GCC's Share in India's Total Exports							
	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
GCC	18%	16%	15%	17%	16%	16%	16%
RoW	82%	84%	85%	83%	84%	84%	84%

Source: UN Comtrade (WITS), analysis by authors

⁶ Shayah M. Hazem, & Qifeng, Yang (2015) "Development of Free Zones in United Arab Emirates", International Review of Research in Emerging Markets and the Global Economy (ISSN: 2311-3200), Vol: 1 Issue 2286.



Source: UN Comtrade (WITS), analysis by authors

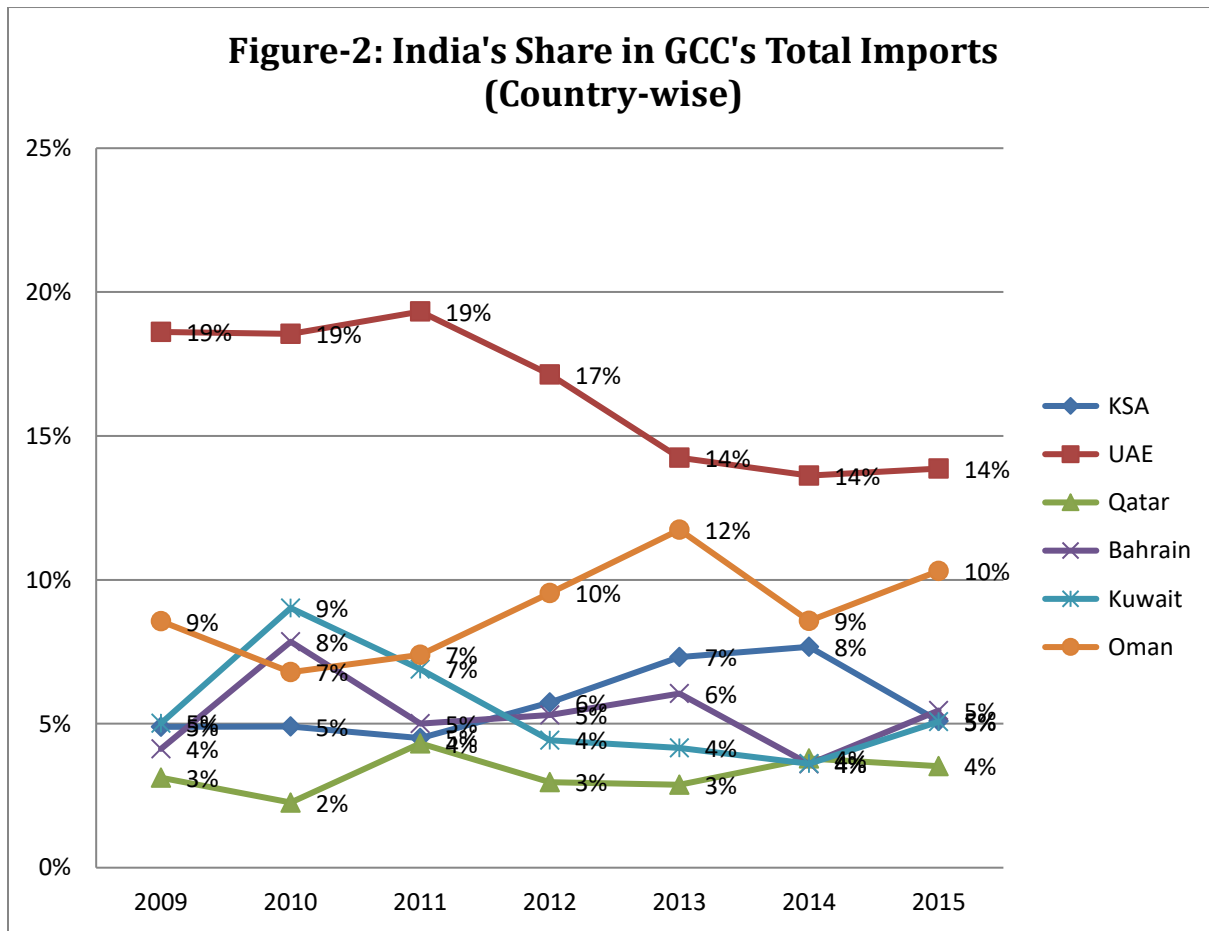
Table-2: India's Share in GCC's Total Imports

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
GCC	12%	12%	13%	11%	10%	10%	10%
RoW	88%	88%	87%	89%	90%	90%	90%

Source: UN Comtrade (WITS), analysis by authors

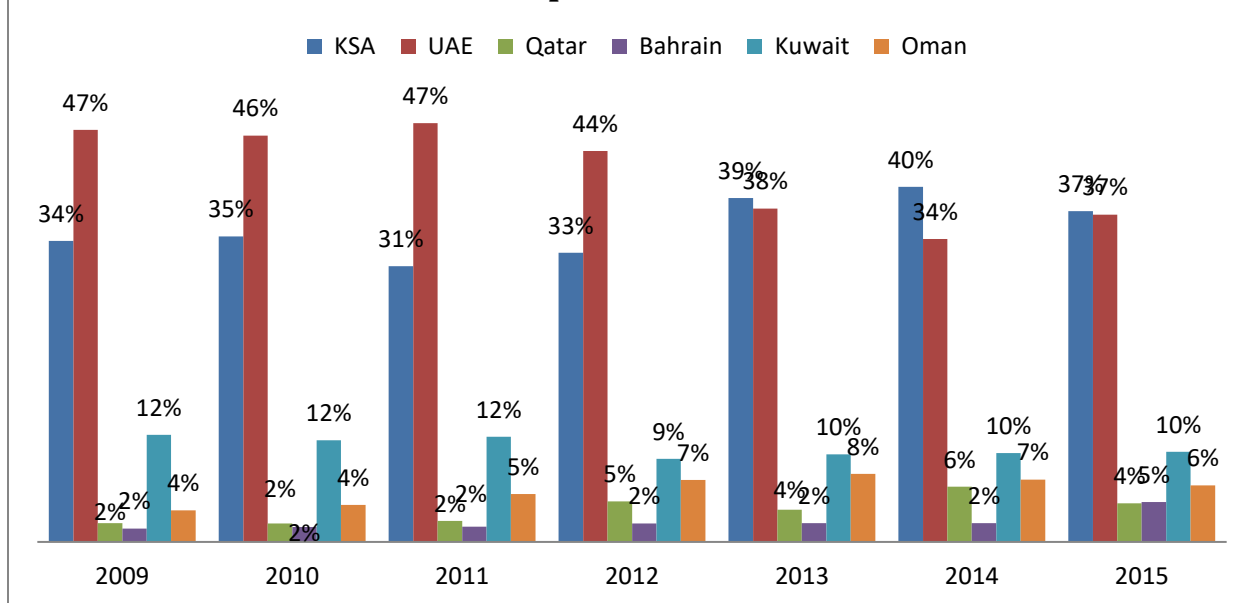
If we see the GCC's import market, India happened to be one of the leading players with 10 to 13 percent share in the GCC's total imports from the world in recent years. This share has been quite stable during the period of study, with small variation of one to two percent. Especially during the last three years, it has been constant at 10 percent as may be seen in the Table No. 2. Among GCC countries, India has the strongest presence in the UAE and India has been the second largest exporter to UAE after China. In terms of share in the total imports, India has maintained its share in the UAE market between 14 to 19 percent during the period 2009-2015; it was constant at 19 percent from 2009 to 2011 then fell to 17

percent in 2012 and now it is again stable at 14 percent since 2013. In terms of share, India has a very good presence in Oman's import market too as around 10 percent of the Oman's total imports originates from India. India's presence in the imports of rest of the four GCC countries, namely KSA, Qatar, Bahrain, and Kuwait is below 10 percent in terms of share as may be seen in Figure No. 2.



Source: UN Comtrade (WITS), analysis by authors

Figure-3: Country-wise share in India's Agriculture Exports to GCC



Source: UN Comtrade (WITS), analysis by authors

Pattern of India's Agriculture Exports to GCC:

Pattern and trend of India's Agriculture exports to GCC is a bit different from the overall exports. Kingdom of Saudi Arabia (KSA) has the highest share of India's Agriculture export to GCC followed by UAE in 2015. While in terms of total exports, KSA's share in India's total exports to GCC is almost less than half of UAE's share. It has also been observed that during the period studied (2009-2015), UAE's share in GCC is falling and KSA's share is rising and this is not because of falling imports of UAE but mainly because of the fact that KSA's agriculture import from India is rising every year. It has also been observed that 75 to 80 percent of India's agriculture export to GCC is destined to KSA and UAE. Among the remaining four countries of GCC, Kuwait is the biggest importer of India's agriculture exports with almost 10 to 12 percent share of India's agriculture exports to GCC. Bahrain and Qatar have the lowest share as may be seen in Figure No. 3.

Table-3: GCC's Share in India's Agriculture Exports							
	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
GCC	20%	16%	14%	11%	12%	15%	17%
RoW	80%	84%	86%	89%	88%	85%	83%

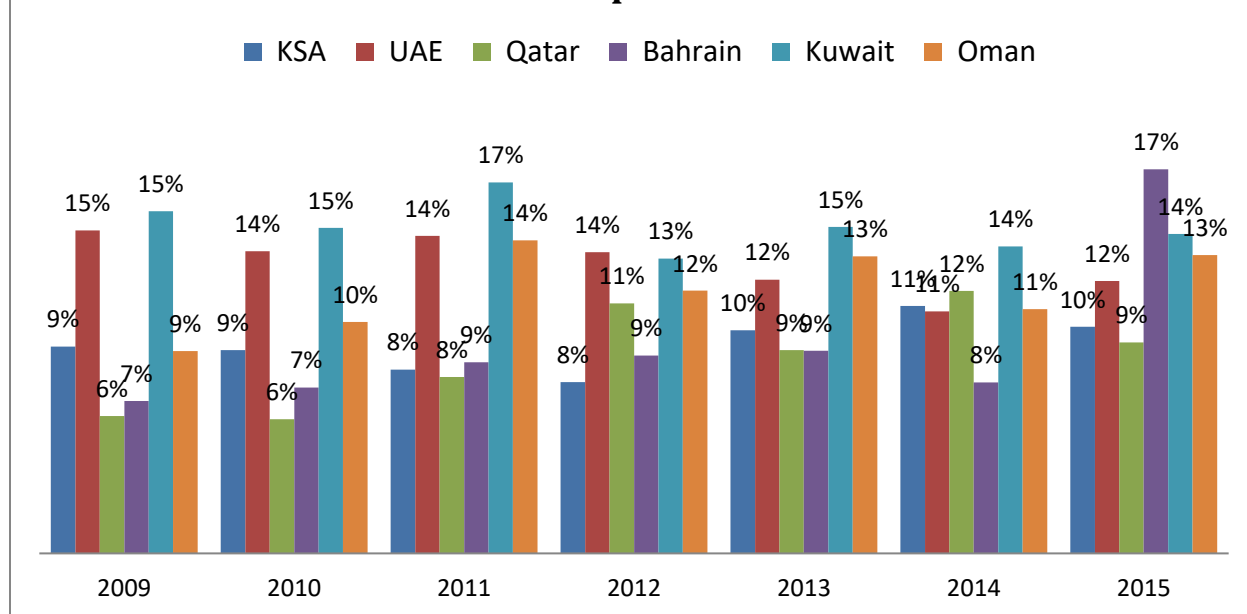
Source: UN Comtrade (WITS), analysis by authors

GCC has a good share of India's agriculture exports. 20 percent of India's agriculture exports were for GCC in the year 2009, it has gone slightly down to 17 percent in 2015 as may be seen in Table No.3. According to some studies, around 60 to 90 percent of the food consumption in the GCC is out of imported food. A very good amount of these imports are from India. Trade data reveals that GCC countries import 11 to 12 percent of their agriculture products from India alone as may be seen in Table No. 4. At the country level, India's share of 11 to 12 percent in the GCC's agriculture imports is quite evenly distributed across countries with a bit higher shares in the Kingdom of Saudi Arabia followed by UAE as may be seen in Figure No. 5.

Table-4: India's Share in GCC's Agriculture Imports							
	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
GCC	12%	11%	12%	11%	11%	11%	12%
RoW	88%	89%	88%	89%	89%	89%	88%

Source: UN Comtrade (WITS), analysis by authors

Figure-5: India's Share in GCC Countries' Agriculture Imports



Source: UN Comtrade (WITS), analysis by authors

Research Methodology:

The purpose of the present study is to assess the export potential of food and agricultural items from India to the Gulf Cooperation Council (GCC) countries. We have analyzed pattern of export from India to GCC using trade data for HS 1-24 categories (excluding HS 3 category), 2905, 3301, 3501 to 3505, 3809 to 3824, 4101 to 4103, 4301, 5001 to 5003, 5101 to 5103, 5201 to 5203, 5301 to 02 categories. WITS database has been used to extract trade data. We have shown GCC's Share in India's Total Export, GCC's share in India's Agriculture Export, India's Share in GCC's Total Imports, India's share in GCC's Agriculture Imports, Country-wise share in India's Total Exports to GCC, Country-wise share in India's Agriculture Exports to GCC and India's Share in GCC Countries' Agriculture Imports through which we can analyze the trade flows.

Bilateral Revealed comparative Advantage (BRCA):

Revealed comparative Advantage shows the competitiveness of the product in countries export compared to products share in world export.

Bilateral RCA: Competitiveness of country i in a specific market

$$BRCA_{ij}^k = \left(\frac{x_{ij}^k}{X_{ij}} \right) / \left(\frac{x_{wj}^k}{X_{wj}} \right)$$

Normalized RCA = (RCA-1)/ (RCA+1)

Revealed comparative advantage indices reveals which industries a country has a comparative advantage in producing goods from. The revealed comparative advantage index developed by Balassa (Balassa, 1967) assumes that a country's comparative advantage is revealed by its exports to the world. Comparative advantage depends on pre-trade relative prices. Principal determinants of these unobservable relative prices are resource and factor endowments, stages of industrialization (that is level of technology), and demand (Ariff, Mohamed and Tan EuChye, 1992). Difference in these determinants across countries lead to differences in autarky relative prices across countries. When countries trade, they export the goods in which they have comparative advantage and import those in which they have comparative disadvantage.

The index of revealed comparative advantage (RCA_{ij}) can be interpreted "If it takes a value greater than unity, the country has a revealed comparative advantage in that product."

We have used Normalized RCA analysis to show number of commodities with advantage and disadvantage with only advantage, with only disadvantage; both advantage and disadvantage.

An index of less than zero suggests a revealed comparative disadvantage in a given product, and an index of greater than suggests a revealed comparative advantage in the product. The normalization means the index is suitable for cross country, cross sector and cross time comparisons.

Partial Equilibrium Analysis (Smart Analysis):

SMART is a partial equilibrium modeling tool included in WITS that is used for market analysis. It focuses on one importing market and its exporting partners and assesses the impact of a tariff change scenario by estimating new values for a set of variables

Single Market Partial Equilibrium Simulation Tool (Smart analysis) from WITS is used to show Change in India's Total Exports to GCC in case of FTA (Zero Tariff)

Data and Data Sources:

World Integrated Trade Solution WITS gives access to international trade and protection related data and offers built-in analytical tools allowing users to assess the impact of tariff changes. WITS is a software developed by the World Bank in close collaboration and consultation with UNCTAD, ITC, UNSD and WTO. It includes several databases provided by partner international organizations and other sources. This combination of various data sources within unique software makes data retrieval and analysis easy and more comprehensive.

The Harmonized Commodity Description and Coding System is a multipurpose international nomenclature for the classification of products developed by the World Customs Organization. It is generally referred to as Harmonized System (HS). The HS arranged in 99 chapters, in which first HS 1-24 are agriculture products including animal and animal products, vegetable products and foodstuffs. At the international level, the Harmonized System (HS) for classifying goods is disaggregated at different levels such as 2-digit, 4-digit and 6-digit levels.

HS chapters HS 1-24 categories (excluding HS 3 category), 2905, 3301, 3501 to 3505, 3809 to 3824, 4101 to 4103, 4301, 5001 to 5003, 5101 to 5103, 5201 to 5203, 5301 to 02 categories were obtained from WITS from 2009 to 2015.

Current tariff structure data between India and GCC has been extracted from Tariff analysis online.

Results and Discussion:

Smart Analysis:

Out of the 231 products that have been analyzed in this study as agriculture products, tariff rates of only 227 could be found in the database of Tariff Analysis Online (TAO), WTO. The tariff structure in the GCC for the agriculture products is such that out of those 227 products, tariff rates for around 50 products are zero in all the GCC countries with slight difference of product selection.

Average tariff rate for agriculture products in the GCC was 3.84 percent according to the data collected for the year 2014 if the tariff line for HS-2403 (Other manufactured tobacco and manufactured tobacco substitutes; “homogenized” or “reconstituted” tobacco; tobacco extracts and essences) is excluded as it has 100 percent tariff rate. The average tariff goes up to 4.19 percent for GCC if the tariff line for the product HS-2403 is included.

Smart Analysis has been used with the single scenario of zero tariff rates for each agriculture product and for each trade lane between India and GCC countries and it has been found that if GCC reduces its tariff rates to zero, the overall increase in India’s exports to GCC in terms of value will be around 288 Million US Dollar. At the country level, India’s exports of agriculture products will increase by 106 Million US Dollar for Kingdom of Saudi Arabia (KSA), 89 Million US Dollar for United Arab Emirates (UAE), 40 Million US Dollar for Kuwait, 23 Million US Dollar for Qatar, 22 Million US Dollar for Oman and 6 Million US Dollar for Bahrain.

Export of commodity categories like Coconuts, Brazil nuts and cashew (HS-0801) and Meat of bovine animals, frozen (HS-0202) have the highest advantage of zero tariff rates in the GCC market as these commodities have the highest export change in almost each country, with 116 Million US Dollar (40% of GCC total) for Coconuts, Brazil nuts and cashew (HS-0801) and 24 Million US Dollar (8% of GCC total) for Meat of bovine animals, frozen (HS-0202). Currently these commodities face 5 percent tariff rate across GCC countries.

Table-5: Change in India's Total Exports to GCC in case of FTA (Zero Tariff)		
<u>Country</u>	<u>Tariff Rate</u>	<u>Change in Exports ('000' US Dollar)</u>
Saudi Arabia	0	106,002.21
United Arab Emirate	0	89,969.44
Bahrain	0	6,611.17
Oman	0	21,867.67
Qatar	0	23,336.12
Kuwait	0	40,436.94
GCC		288,223.55

Source: WITS, analysis by authors

Saudi Arabia: The export change in the agriculture products from India to Saudi Arabia, as a result of reduction in the tariff rates to zero, is highly concentrated. Top ten commodities represent 81 percent of the total export change of 106 Million US Dollar. 'Coconuts, Brazil nuts and cashew' (HS-0801) and 'Meat of bovine animals, frozen' (HS- 202) have the highest advantage.

UAE: The export change in the agriculture products from India to United Arab Emirate, as a result of reduction in the tariff rates to zero, is comparatively less concentrated. Top ten commodities represent 56 percent of the total export change of 89 Million US Dollar. 'Coconuts, Brazil nuts and cashew' (HS-0801) and 'Meat of bovine animals, frozen' (HS-202) have the highest advantage.

Bahrain: The export change in the agriculture products from India to Bahrain, as a result of reduction in the tariff rates to zero, is quite concentrated. Top ten commodities represent 66 percent of the total export change of 66 Million US Dollar. 'Coconuts, Brazil nuts and cashew' (HS-0801) and 'Meat of bovine animals, frozen' (HS-0202) have the highest advantage.

Oman: The export change in the agriculture products from India to Oman, as a result of reduction in the tariff rates to zero, is highly concentrated. Top ten commodities represent 77 percent of the total export change of 21 Million US Dollar. 'Undenatured ethyl alcohol of an

alc' (HS-2208), 'Coconuts, Brazil nuts and cashew' (HS-0801) and 'Meat of bovine animals, frozen' (HS-0202) have the highest advantage.

Qatar: The export change in the agriculture products from India to Qatar, as a result of reduction in the tariff rates to zero, is highly concentrated. Top ten commodities represent 82 percent of the total export change of 23 Million US Dollar. 'Coconuts, Brazil nuts and cashew' (HS-0801) and 'Acyclic alcohols and their halogena' (HS-2905) have the highest advantage.

Kuwait: The export change in the agriculture products from India to Kuwait, as a result of reduction in the tariff rates to zero, is highly concentrated. Top ten commodities represent 88 percent of the total export change of 40 Million US Dollar. 'Coconuts, Brazil nuts and cashew' (HS-0801) and 'Meat of bovine animals, frozen' (HS-0202) have the highest advantage.

Table-6: Top ten commodities with highest Exports Change in case of '0' Tariff**Saudi Arabia**

1. Coconuts, Brazil nuts and cashew (0801)
2. Meat of bovine animals, frozen. (0202)
3. Milk and cream, concentrated or con (0402)
4. Other manufactured tobacco (2403)
5. Fruit juices (including grape must)(2009)
6. Vegetables (uncooked or cooked by s (0710)
7. Meat of sheep or goats, fresh (0204)
8. Prepared binders for foundry moulds (3824)
9. Ginger, saffron, turmeric (curcuma)(0910)
10. Coconut (copra), palm kernel (1513)

United Arab Emirate

1. Coconuts, Brazil nuts and cashew (0801)
2. Meat of bovine animals, frozen (0202)
3. Coconut (copra), palm kernel (1513)
4. Flours and meals of oil seeds (1208)
5. Plants and parts of plants (1211)
6. Prepared binders for foundry moulds (3824)
7. Milk and cream, concentrated (0402)
8. Food preparations not elsewhere (2106)
9. Other manufactured tobacco (2403)
10. Chocolate and other food preparation (1806)

Bahrain

1. Coconuts, Brazil nuts and cashew (0801)
2. Meat of bovine animals, frozen (0202)
3. Cereal grains otherwise worked (1104)
4. Meat and edible offal, of the poultry (0207)
5. Cotton, not carded or combed (5201)
6. Ginger, saffron, turmeric (0910)
7. Birds' eggs, in shell, fresh (0407)
8. Bread, pastry, cakes, biscuits (1905)
9. Chocolate and other food preparations (1806)
10. Prepared binders for foundry moulds (3824)

Oman

1. Undenatured ethyl alcohol (2208)
2. Coconuts, Brazil nuts and cashew (0801)
3. Meat of bovine animals, frozen. (0202)
4. Oil-cake and other solid residues (2306)
5. Birds' eggs, in shell, fresh (0407)
6. Flours, meals and pellets, of meat (2301)
7. Meat of swine, fresh, chilled (0203)
8. Ginger, saffron, turmeric (0910)
9. Dextrin and other modified starches (3505)
10. Meat and edible offal, of the poultry (0207)

Qatar

1. Coconuts, Brazil nuts and cashew (0801)
2. Acyclic alcohols and their halogena (2905)
3. Flour, meal and powder of the dried (1106)
4. Meat of bovine animals, frozen. (0202)
5. Meat of sheep or goats, fresh (0204)
6. Ginger, saffron, turmeric (0910)
7. Flours and meals of oil seeds (1208)
8. Vegetable materials and vegetable (2308)
9. Bread, pastry, cakes, biscuits (1905)
10. Cereal grains otherwise worked (1104)

Kuwait

1. Coconuts, Brazil nuts and cashew (0801)
2. Meat of bovine animals, frozen (0202)
3. Coconut (copra), palm kernel (1513)
4. Chocolate and other food preparations (1806)
5. Ginger, saffron, turmeric (0910)
6. Anti-knock preparations, oxidation (3811)
7. Cereal grains otherwise worked (1104)
8. Prepared binders for foundry moulds (3824)
9. Bread, pastry, cakes, biscuits (1905)
10. Pepper of the genus Piper; dried (0904)

Source: WITS, analysis by authors

Bilateral Revealed Comparative Advantage:

India's agriculture export that is covered under 231 products at HS 4 digit level, has been analyzed separately for each GCC country with the help of Bilateral Revealed Comparative Advantage for the period 2009-2015. It has been found that the commodities where India faces disadvantage in the GCC market are much higher in numbers than the commodities where it has Revealed Comparative Advantage. The lowest number of products with advantage is in the Kingdom of Saudi Arabia market, followed by United Arab Emirate having average number of products with advantage around 28 and 52 respectively out of 231 products that were analyzed. The markets where Indian agriculture exports have the highest advantage are Qatar and Oman, followed by Kuwait and Bahrain.

The number of products with Advantage or Disadvantage does not vary much for any GCC country during the period 2009-2015.

Year	Number of commodities with Advantage						Number of commodities with Disadvantage					
	KSA	UAE	Bahrain	Oman	Qatar	Kuwait	KSA	UAE	Bahrain	Oman	Qatar	Kuwait
2009	27	50	74	78	78	66	203	181	157	153	153	165
2010	32	54	57	76	80	57	199	177	174	155	151	174
2011	30	52	73	88	70	63	201	179	158	143	161	168
2012	26	55	66	69	78	72	205	176	165	162	153	159
2013	22	47	69	59	86	69	209	184	162	172	145	162
2014	18	55	77	65	63	78	213	176	154	166	168	153
2015	38	52	-	80	80	66	193	179	-	151	151	165
Average	28	52	59	74	76	67	203	179	139	157	155	164

Source: UN Comtrade (WITS), analysis by authors

The products in the Indian export basket to GCC that have advantage are not same for each year. Most of the products change from the category of having advantage to disadvantage.

There are only 11 products out of 231 that have advantage across years for Saudi Arabia, 25 for UAE, 34 for Oman, 37 for Bahrain, 43 for Qatar, 34 for Kuwait.

Table-8: India's Agriculture Exports to GCC-BRCA (2009-2015)			
Country	Number of commodities with only Advantage	Number of commodities with only Disadvantage	Number of commodities with both AD & DI
Saudi Arabia	11	177	43
United Arab Emirate	25	138	68
Oman	34	107	90
Bahrain	37	117	77
Qatar	43	113	75
Kuwait	34	112	85

Source: UN Comtrade (WITS), analysis by authors

Conclusion:

GCC is not just an important origin for India to receive energy resources and have movement of natural persons, it's an attractive destination too for our exports and India's agriculture exports suggest that India should move forward and sign a Free Trade Agreement with GCC as a region or bilaterally with GCC countries. India has a lot to gain in its agriculture sector if tariffs are removed in the GCC market. China has already realized the importance of having strong trade ties with the region and they are at the final stage of signing a China-GCC Free Trade Agreement soon which was scheduled to be signed by 2016. Since India is the second largest player in the GCC after China, it should also strengthen its ties with GCC if it has to maintain its position in the market. India may gain the benefit of 288 Million US Dollar only in the agriculture sector if an FTA is signed between India and GCC.

If India has to negotiate with the GCC on tariff reduction, India should press for zero tariff rate at least for the products, Coconuts, Brazil nuts and cashew (HS-0801) and Meat of bovine animals, frozen (HS-0202) as around half of the benefit of tariff cut has to come in

these two product categories. The products which may see the highest export growth are Coconuts, Brazil nuts and cashew (HS-0801) and Meat of bovine animals, frozen (HS-0202) as 48% of the Export change is in these two product categories. In case of zero tariff in GCC, India's agriculture export will see highest growth in Saudi Arabia (\$106 Million) followed by UAE (\$89 Million), Kuwait (\$40 Million), Qatar (\$23 Million), Oman (\$22 Million) and Bahrain (\$6 Million). Out of 231 agriculture products, India has highest average number of products with BRCA in Qatar (76), followed by Oman (74), Kuwait (67), Bahrain (59), UAE (52) and Saudi Arabia (28).

References:

1. Shah, Mahendra. (2010) "Gulf Cooperation Council food security: balancing the equation", Springer Nature, Macmillan Publishers Limited, Published online 25 April 2010.
2. Biswajit Mohapatra, "India and GCC Relations – New Horizons", Diplomatist, Special Report, INDIA-GCC: Partners in Growth, July 2016, pp.8 - 9, published by Diplomatist Magazine, Delhi in association with the Gulf Division, Ministry of External Affairs, Govt of India
3. International Agricultural Trade Report, August 2014, Foreign Agriculture Service, United States Department of Agriculture.
4. The Hindu, Oct 1, 2015
5. Shayah M. Hazem, & Qifeng, Yang (2015) "Development of Free Zones in United Arab Emirates", International Review of Research in Emerging Markets and the Global Economy (ISSN: 2311-3200), Vol: 1 Issue 2286.
6. Woertz Eckart (2010) "Arab Food, Water and the Big Gulf Landgrab that Wasn't" The Brown Journal of World Affairs.
7. RigiLadez Saeed & Khan Mohd Asef (2014) "Trade relations between India and Gulf cooperation council countries- An Empirical Study", IRJBM (www.irjbm.org), Volume No. VII, November, 2014 Issue-11.
8. Prasanta Kumar Pradhan (2010) India and Gulf Cooperation Council: Time to Look Beyond Business, Strategic Analysis, 34:3, 409-419, DOI: 10.1080/09700161003659103
9. Karayil Sajitha Beevi (2007) "Does Migration Matter in Trade? A Study of India's Exports to the GCC Countries" South Asia Economic Journal January 2007 vol. 8 no. 1 1-20 DOI: 10.1177/139156140600800101
10. Pradhan, Samir Ranjan (2006), India's Export Potential to the GCC Countries", UNESCAP research paper, Bangkok, Thailand.

11. Das Prasann Kumar & Pradhan Samir Ranjan (2014), "India-Gulf Trade Relations" , IOSR Journal of Economics and Finance (IOSR-JEF) e-ISSN: 2321-5933, p-ISSN: 2321-5925. Volume 4, Issue 1. (May-Jun. 2014), PP 31-41 www.iosrjournals.org
12. "FTA to boost India's links with UAE and GCC" (2016), <http://www.emirates247.com/business/economyfinance/ftatoboostindiaslinkswithuaeandgcc201602091.620406?ot=ot.PrintPageLayout>
13. Hawke Hlinda Brady " India Published and produced by Diplomatist Magazine an imprint of L.B. Associates (Pvt) Ltd in collaboration with Ministry of External Affairs, Govt. of India"
14. Shah Mahendra (2010) "Gulf Cooperation Council food security: balancing the equation", doi:10.1038/nmiddleeast.2010.141; Published online 25 April 2010 Commentary
15. Abotorabiardestani Zahra "The GCC States and India Relations", IMPACT: International Journal of Research in Applied, Natural and Social Sciences (IMPACT: IJANSS) ISSN(E): 2321-8851; ISSN(P): 2347-4580 Vol. 3, Issue 6, Jun 2015, 1-8
16. Insel Aysu and Tekce Mahmut "Bilateral Trade flows of the Gulf Cooperation council Countries: A New Approach to Gravity Model"
17. UN Comtrade Database
18. WITS, World Bank

Appendix

Table-9: Average Tariff Rate on Agricultural Products (227 Products) in GCC-2014		
<u>Country</u>	<u>Excluding '2403'</u>	<u>Including '2403'</u>
Saudi Arabia	3.99	4.43
UAE	3.79	3.79
Bahrain	3.79	4.23
Kuwait	3.79	4.23
Qatar	3.79	4.23
Oman	3.79	4.23
GCC	3.84	4.19
<i>Note: HS Code-2403 is Other manufactured tobacco and manufactured tobacco substitutes; "homogenized" or "reconstituted" tobacco ; tobacco extracts and essences</i>		

Source: UN Comtrade (WITS), analysis by authors

Table-10: Agricultural Products with Zero Tariff Rates in GCC-2014		
<u>Country</u>	<u>Number of Products with Zero Tariff</u>	<u>Total Number of Products</u>
Saudi Arabia	50	227
UAE	52	227
Bahrain	51	227
Kuwait	51	227
Qatar	51	227
Oman	51	227
<i>Note: Out of 231 agricultural products, tariff rates of only 227 products could be found from Tariff Analysis Online (TAO), WTO</i>		

Source: UN Comtrade (WITS), analysis by authors

Table-11: Top ten commodities with highest Exports change in case of Zero Tariff - Saudi Arabia			
S.N.	HS Code	Commodity Name	Export Change ('000 \$)
1	801	Coconuts, Brazil nuts and cashew nu	49440.62
2	202	Meat of bovine animals, frozen.	13482.85
3	402	Milk and cream, concentrated or con	5824.87
4	2403	Other manufactured tobacco and manu	4647.70
5	2009	Fruit juices (including grape must)	2730.05
6	710	Vegetables (uncooked or cooked by s	2361.64
7	204	Meat of sheep or goats, fresh, chil	2207.49
8	3824	Prepared binders for foundry moulds	2040.06
9	910	Ginger, saffron, turmeric (curcuma)	1635.55
10	1513	Coconut (copra), palm kernel or bab	1555.37
Sub total			85926.20
Total			106002.21
Share of top ten in total Export Change			81.06 %

Source: UN Comtrade (WITS), analysis by authors

Table-12: Top ten commodities with highest Exports change in case of Zero Tariff- United Arab Emirate			
S.N.	HS Code	Commodity Name	Export Change ('000 \$)
1	801	Coconuts, Brazil nuts and cashew nu	18440.15
2	202	Meat of bovine animals, frozen.	5971.02
3	1513	Coconut (copra), palm kernel or bab	5270.7
4	1208	Flours and meals of oil seeds or ol	4991.18
5	1211	Plants and parts of plants (includi	3422.44
6	3824	Prepared binders for foundry moulds	3198.48
7	402	Milk and cream, concentrated or con	2607.37
8	2106	Food preparations not elsewhere spe	2408.23
9	2403	Other manufactured tobacco and manu	2373.75
10	1806	Chocolate and other food preparation	2087.42
Sub total			50770.72
Total			89969.44
Share of top ten in total Export Change			56.43%

Source: UN Comtrade (WITS), analysis by authors

Table-13: Top ten commodities with highest Exports change in case of Zero Tariff- Bahrain			
S.N.	HS Code	Commodity Name	Export Change ('000 \$)
1	801	Coconuts, Brazil nuts and cashew nu	921.25
2	202	Meat of bovine animals, frozen.	840.44
3	1104	Cereal grains otherwise worked (for	627.35
4	207	Meat and edible offal, of the poultry	602.78
5	5201	Cotton, not carded or combed.	389.81
6	910	Ginger, saffron, turmeric (curcuma)	238.73
7	407	Birds' eggs, in shell, fresh, prese	215.05
8	1905	Bread, pastry, cakes, biscuits and	196.73
9	1806	Chocolate and other food preparations	193.21
10	3824	Prepared binders for foundry moulds	160.32
Sub total			4385.67
Total			6611.17
Share of top ten in total Export Change			66.34%

Source: UN Comtrade (WITS), analysis by authors

Table-14: Top ten commodities with highest Exports change in case of Zero Tariff- Oman			
S.N.	HS Code	Commodity Name	Export Change ('000 \$)
1	2208	Undenatured ethyl alcohol of an alc	5054.00
2	801	Coconuts, Brazil nuts and cashew nu	5044.37
3	202	Meat of bovine animals, frozen.	1794.08
4	2306	Oil-cake and other solid residues,	1389.56
5	407	Birds' eggs, in shell, fresh, prese	950.32
6	2301	Flours, meals and pellets, of meat	724.96
7	203	Meat of swine, fresh, chilled or fr	642.59
8	910	Ginger, saffron, turmeric (curcuma)	480.15
9	3505	Dextrins and other modified starche	433.82
10	207	Meat and edible offal, of the poul	408.37
Sub total			16922.21
Total			21867.67
Share of top ten in total Export Change			77.38%

Source: UN Comtrade (WITS), analysis by authors

Table-15: Top ten commodities with highest Exports change in case of Zero Tariff- Qatar			
S.N.	HS Code	Commodity Name	Export Change ('000 \$)
1	801	Coconuts, Brazil nuts and cashew nu	11457.65
2	2905	Acyclic alcohols and their halogena	3220.99
3	1106	Flour, meal and powder of the dried	782.56
4	202	Meat of bovine animals, frozen	753.34
5	204	Meat of sheep or goats, fresh	737.23
6	910	Ginger, saffron, turmeric (curcuma)	575.90
7	1208	Flours and meals of oil seeds	491.17
8	2308	Vegetable materials and vegetable	453.13
9	1905	Bread, pastry, cakes, biscuits	382.93
10	1104	Cereal grains otherwise worked	330.41
Sub total			19185.31
Total			23336.12
Share of top ten in total Export Change			82.21 %

Source: UN Comtrade (WITS), analysis by authors

Table-16: Top ten commodities with highest Exports change in case of Zero Tariff - Kuwait			
S.N.	HS Code	Commodity Name	Export Change ('000 \$)
1	801	Coconuts, Brazil nuts and cashew	30867.33
2	202	Meat of bovine animals, frozen	1595.23
3	1513	Coconut (copra), palm kernel	861.39
4	1806	Chocolate and other food	559.47
5	910	Ginger, saffron, turmeric (curcuma)	483.86
6	3811	Anti-knock preparations, oxidation	384.90
7	1104	Cereal grains otherwise worked	265.93
8	3824	Prepared binders for foundry moulds	265.31
9	1905	Bread, pastry, cakes, biscuits	226.07
10	904	Pepper of the genus Piper; dried	222.10
Sub total			35731.60
Total			40436.94
Share of top ten in total Export Change			88.36 %

Source: UN Comtrade (WITS), analysis by authors