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Food and Agricultural Trade in the GCC: An Opportunity for South Asia?

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Abstract: The purpose of the present study is to assess the export potential of food and agricultural items from South Asian Association for Regional Cooperation (SAARC) countries to the Gulf Cooperation Council (GCC) countries. We investigated the pattern of trade between the two regions using trade indices and trade data for HS 1–24 categories and also estimated a gravity equation to determine the factors affecting bilateral trade. We extracted UN ComTrade data on exports from the Trademap and the WITS database was used to retrieve data in trade intensities. The results of the descriptive analysis show that India has an advantageous position to achieve more gains from increasing GCC-SAARC food and agricultural trade. The results of the estimation of the gravity equation indicate that the conventional trade cost variables have significant effects on total and food and agricultural trade and India have the highest potential for increasing food and agricultural exports to GCC countries. Further economic cooperation between the GCC and India in the form of a regional integration scheme would enhance trade and food security in the region.

Keywords: gravity model, agricultural trade, GCC and South Asia
JEL Classification: F1 (trade), F2 (international factor movements and international business), Q1 (agriculture)

1 Introduction

Bilateral trade between the countries of the Gulf Cooperation Council (GCC) and the countries of South Asian Association for Regional Cooperation (SAARC) has

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a long history dating back to the Silk Road. Although characterized by periodical leaps and bounds, trade between the GCC and SAARC remains brisk. In the modern context, the prominent trade relationship between these two regions arise due to the vital position of the GCC as the leading oil-based energy exporter and due to the ever increasing demand for energy from SAARC region contributed by the emerging economies such as India. Apart from this trade linkage, another potential avenue for inter-regional trade between the GCC and the SAARC countries are available due to the dependence of the GCC countries on food and agricultural imports. The inherent climatic conditions of the GCC countries restrain the agricultural production in the region leading to the reliance on food and agricultural imports.

The GCC is a political and economic union of Arab states namely Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the Unites Arab Emirates. The GCC was formed in 1981 in order to strengthen the members' economic, social and political ties by harmonizing regulations in various fields including economy, finance, trade and customs. This region has a population of 47 million and extends through 2,410.7 thousand square kilometers. The SAARC consists of eight South Asian member states namely Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. South Asia is one of the regions that are worst affected by poverty and hunger where 70 % of the population live in rural areas. According to the World Development Report of 2008, the agriculture sector in South Asia employs about 60 % of the labor force while contributing to 22 % of the regional GDP (World Bank 2008). Hence, it is clear that the agriculture sector plays an integral role in the development process of the region.

The GCC has a continuous need of a stable food supply. The gap between the agricultural production of the GCC countries and consumption has gone up substantially in recent years. The GCC nations are shifting their agricultural policies away from the nationalistic goal of food self-sufficiency toward more flexible and broad-based efforts including the reliance on imports to ensure food security.[1] The relative position of the two regions, i. e. GCC as a net food importer and the SAARC as an agricultural and food producer, opens an avenue for a vibrant trade relationship. Furthermore, having a large portion of the population depending on agriculture-based livelihoods; the SAARC region can achieve welfare gains through enhanced foreign exchange earnings while the GCC can achieve benefits due to stabilization of food supplies. Given the above

1 For example Saudi Arabia, which has become self-sufficient in wheat and a world exporter, decided in 2008 to gradually phase out its wheat production and rely totally on wheat imports by the end of 2016 in order to conserve its non-renewable water resources.

backdrop, the overall purpose of the current study is to investigate the potential export opportunities that exist for the countries in the SAARC region to cater to the growing demand for food and agricultural items in the GCC countries. The present study will specifically examine:

(i) The changing pattern of import sources of food and agricultural items of the GCC countries paying special attention to the South Asian countries over the past decade using concentration ratios and trade intensity index;
(ii) The changing pattern of export destinations of food and agricultural items of the South Asian countries paying special attention to the GCC countries over the past decade using concentration ratios and trade intensity;
(iii) The determinants of food and agricultural trade between the two regions using a gravity model;
(iv) The existing trade potential across various country pairs in the two regions using a simulation exercise coupled with gravity estimates.

The paper is organized as follows. The next section will present a brief review of previous studies on emerging inter regional trade between the GCC and the SAARC regions. Section 3 is devoted to the methodology in which concepts, measures, data and data sources are explained. Section 4 will present and discuss the results. Section 5 will conclude the paper with some policy implications.

2 Literature Review

Asia and the GCC have emerged as important players in the world trade. Asia has successfully positioned itself as the center for the manufacture of goods for export and the GCC remains the top region for energy exports. This trade pattern characterizing the two regions has been extensively studied by researchers using different approaches.

2.1 Descriptive Analysis

Al-Tamimi (2013) states that the GCC-Asia trade relations have grown substantially over the past few years and Asia accounts for nearly 60 % of GCC's total foreign trade. GCC countries see Asia as one of the most important strategic market for its energy exports and Asia would account for up to 90 % of oil exports from the Middle East in the future. Undoubtedly, the emerging economies such as China and India had opened avenues for enhanced trade relations between the GCC and Asia. The National Intelligence Council (2012) predicts that

by 2030 Asia will have surpassed North America and Europe combined in terms of global power, based upon GDP, population size, military spending, and technological investment.

According to Pradhan (2010), GCC-SAARC economic relations are characterized with new strategic geo-economic interactions involving energy and petrodollar investment flowing east from the Gulf and cheap consumer goods, knowledge-driven technologies and migrant labor, flowing west from South Asia. The author argues that between 2004 and 2008 trade volumes between the GCC and SAARC have increased more than six-fold. Much of the incremental demand for GCC exports going forward – not just for oil and gas but also petrochemicals, base metals and services such as finance and tourism – are coming from the SAARC and the Asia region as a whole. In the present era, the economic interdependencies between the two regions are not limited to energy trade and spread to investment, labor migration, remittances, food security, etc.

According to Pradhan (2010) and Karayil (2007), the trade profile of the two regions is not so diversified and also heavily concentrated on the consumption patterns and consequent imports of goods catering to the South Asian expatriates living in the GCC and GCC's energy exports (oil and gas). On the other hand, Pradhan (2010) further argues that the widely speculated trade relations between the regions can be hampered by structural barriers. GCC countries face formidable barriers, in terms of higher duties on their exports to South Asia in general and to India in particular while exports from South Asia face a nominal duty of 5% and in many cases a lower rate ranging from 1.5% to 2% in the GCC. Woertz (2010) suggests that multilateral approaches rather than administrative measures such as export restrictions or bilateral approaches to food security are necessary

2.2 Econometric Analysis

The determinants of trade flows between these two regions have been the subject of many studies. Insel and Tekce (2010), using a gravity model, found that the pattern of trade between GCC countries and their partners have changed over time and new economic relations have been particularly developed after the 2003 custom union agreement.[2] The results of the gravity model indicate that the relationship between geographical distance and bilateral trade is insignificant and income and time invariant variables determine

2 The GCC countries' integration process evolved from a free trade area to a custom union in January 2003 where the common external tariff (CET) was set at 5%.

bilateral trade of GCC countries.[3] According to the results of the gravity model estimation by Pradhan (2006), the magnitude of India's export potential is highest with Oman, followed by Qatar, Bahrain, and Kuwait. The results further indicate that no export potential is reported for UAE, and Saudi Arabia. Pradhan suggested that the formation of a regional trade agreement with India can potentially enhance exports of India to GCC countries.

Karayil (2007), who investigated the link between migration and trade using a gravity model, highlights a strong immigrant preference effect for their home-country products within the context of India and GCC trade. Hence, the expatriate population of South Asia in the GCC countries plays a vital role in the demand for food products by the GCC. Boughanmi (2008) who assessed the trade potential of Gulf Arab countries using a similar model concludes that the level of the GCC intra-trade has not changed significantly during 1993–2004 and had probably reached its full potential during the first decade of the GCC creation. Trade with the Mashreq countries were more than expected, while it is less than expected with the Maghreb countries[4] despite the implementation of the Greater Arab Free trade Area (GAFTA), a decade ago. The GCC trade with the European Union and the US was found to be quite intensive although no formal trade arrangement existed between the GCC and both blocs for the time-period used in the analysis. He suggested that the newly signed trade arrangements are promising in enhancing new opportunities of trade in the GCC region.

In this respect, there is substantial evidence for emerging food and agricultural trade between the GCC and the SAARC in trade literature. The "food gap" in the GCC in recent years has gone up substantially due to growing populations and change in structure of the population due to the expatriate community. These drivers have created an opportunity for the SAARC countries which are rich in agricultural resources to supply the food requirement of the GCC region.

3 The unexpected sign and insignificance of the distance variable is explained by the authors as due to the main characteristics of the trade commodity (oil) and to the geographical situation of the GCC countries. The GCC countries are surrounded by either low-income countries or oil exporting countries which do not import oil from the GCC. The GCC exports to relatively wealthy countries of Europe and Asia where the demand for oil is high and therefore transport costs do not really matter.

4 The Maghreb refers in the Middles East literature to the Arab Maghreb Union (AMU) which groups 5 North African countries (Tunisia, Morocco, Algeria, Libya, and Mauritania) while the Mashreq refers to a group of 5 countries (Egypt, Jordan, Syria, Iraq, and Lebanon). The Maghreb countries constitute a formal political entity (AMU) known by its strong ties with the European Union while the Mashreq countries have strong ties with the GCC countries but do not constitute a formal trade bloc.

Our study aims to put food security in the heart of the relationship between the GCC and The SAARC.[5] The study, first to our knowledge, focuses on the agricultural sector and disaggregates trade between the two regions into its finest components (HS 1–24) as classified in the World Customs' Harmonized System (HS). At a finer disaggregation level, trade flows may be differently affected by standard trade factors than at a more aggregate level. For example, specific agricultural products, given their more perishable nature would be more responsive to distance than industrial products.

3 Methods of Analysis

The changing pattern of import sources of food and agricultural products of the GCC countries and the changing pattern of export destinations of food and agricultural products of the SAARC countries over the recent period (2008–2012) is analyzed using two trade indices, the concentration ratio and trade intensity index. In order to analyze the potential and the determinants of food and agricultural trade between the GCC and the SAARC, the indicative trade potential (ITP) indicator and the gravity model approach were used.

3.1 Concentration Ratio

Export or import concentration ratios reflect the degree to which a country's exports/imports are concentrated in a small number of products or a small number of trading partners. The imports/export concentration concept has evolved from the seminal contributions of Prebisch (1950) and Singer (1950) and the arguments advocated by Rosenstein-Rodan (1943) who viewed economic diversification rather than specialization as a determinant of economic development. According to Samen (2010), minimizing the risk of market instability is a major reason for the benefits from the diversification. Ghosh and Ostry (1994) and Bleaney and Greenaway (2001) argue that market diversification could therefore help to stabilize export earnings in the long-run. Though the literature using the concentration ratio has focused on the export side, it is important to extend the utilization of this concept for importing countries. For instance, in the current study the concept of market diversification in imports can be used to test

5 Boughanmi, Mbaga, and Kotagama (2009) focused on the trade flow patterns for food and agricultural products; however their study was in relation to the GCC integration schemes rather than trade with the SAARC.

whether the trade pattern (imports) of GCC countries has changed recently toward depending on few countries for food and agricultural imports. If the concentration is high then these countries are prone for market instabilities and such a threat will pose greater economic, social and political implications. The current study focuses on these dual aspects of market concentration in the context of GCC and SAARC trade relations.

In the empirical realm, market concentration can be analyzed using indicators such as Herfindahl index (Reis and Farole 2012; World Trade Organization 2012).

$$h^i = \sum_k (S_k^i)^2$$

where h^i is the Herfindahl concentration index for country i; S_k^i is the share of sector k in country i's total exports or imports

The same formula can be used to indicate the concentration in markets where the summation is done for over countries for a particular product. The current study used both concepts of concentration ratios for the analysis of the trade patterns of GCC and SAARC, i. e. imports of food and agricultural products of GCC from the world and SAARC region and the exports of food and agricultural products by SAARC to the GCC. As it has been argued by Reis and Farole (2012), the top 3, 5, and 10 products and markets as a percentage of total exports/imports can be used to depict the concentration among products and markets respectively. The higher the magnitude of the ratio the higher is the dependence of an exporting country/importing country on few trade partners.

3.2 Trade Intensity Index

The trade intensity statistic is the ratio of two export shares. The numerator is the share of the destination of interest in the exports of the region under study. The denominator is the share of the destination of interest in the exports of the world as a whole. Trade intensity index takes a value between 0 and $+\infty$. Values greater than 1 indicate an 'intense' trade relationship. Trade intensity index provides the information on whether or not a region exports more to a given destination than the world does on average. It is given by the following equation

$$TII_{ij} = \frac{X_{ij}}{X_i} \Big/ \frac{X_{wj}}{X_w}$$

where TII_{ij} is the trade intensity index, X_{ij} is the export of country i to country j, X_i is country i total exports, X_{wj} is the world's exports to country j, and X_w is the world's total exports.

The trade intensity index is interpreted in much the same way as an export share. It does not suffer from any 'size' bias, so we can compare the statistic across regions, and over time when exports are growing rapidly. Several authors such as Brown (1947), Kojima (1964), Drysdale and Garnaut (1982) Anderson (1983) and Yeats (1998), have noted that the measure has been used since the 1940s in numerous analyses of the direction and level of international trade. In this study both of the trade intensity, i. e. for overall trade and agricultural trade were used to investigate the prospect for the SAARC countries in increasing trade relations with GCC.

3.3 Indicative Trade Potential (ITP)

The purpose behind the indicator of indicative trade potential is the identification of the products for which there is the highest trade complementarity between the exports of a country and the imports of the target country. The trade potential indicator assumes that the importing country could in principle absorb perfectly all imports from the exporter. With such a strong underlying substitution assumption, the resulting figures are only indicative but can nevertheless be used in order to rank the products (Helmers and Pasteels 2006). In the current study, the ITP was used to identify the food and agricultural commodities with highest export potential for SAARC countries to GCC countries. The indicative trade potential is given by the following equations:

$$TPI_{ij} = 100\left[1 - \sum_{k} \frac{\left|m_k^i - x_k^j\right|}{2}\right]$$

where m_k^i is product's k share in country i imports, x_k^i is product's k share in country j exports to the world. A maximum score of 100 indicates that the two countries are ideal trading partners whereas a low score indicates that the two countries export similar products and the potential of expanding one's exports to the other is limited.

3.4 Gravity Model

The theoretical gravity model, advanced by Anderson and Van Wincoop (2003), with exporter and importer fixed effects was used for the analysis of the determinants of food and agricultural trade between the two regions, i. e. the GCC and SAARC. Tinbergen (1962), the founding father of the Gravity Model of

International Trade, proposed this particular econometric model and it was formulated along the lines of Newtonian universal gravitation, where trade flow is directly related to the economic size of the countries involved, and inversely related to the distance between them (De Benedictis and Taglioni 2001). This intuitive gravity model was subjected to theoretical scrutiny and many revisions were done to get rid of possible biases.

In this study two models were estimated as for total trade and food and agricultural trade separately. The gravity model is given by the following equation:

$$\begin{aligned} lnexports_{ij} = {} & \beta_0 + \beta_1 \ln\_exportGDP + \beta_2 \ln\_importGDP + \beta_3 lndist_{ij} + \beta_4 comofflan_{ij} \\ & + \beta_5 colonylink_{ij} + \beta_6 border_{ij} + \beta_7 sa\_intra_{ij} + \beta_8 eastasia\_intra_{ij} \\ & + \beta_9 gcc\_intra_{ij} + \beta_{10} eu\_intra_{ij} + \beta_{11} sa\_gcc\_pair_{ij} + F_i + F_j + \varepsilon_{ij} \end{aligned}$$

In the above specified model, subscript *i* denotes the exporting country and *j* denotes the importing country. The variable $exports_{ij}$ is the value of exports from country *i* to its trading partner *j*. In the estimation two models were used, model 1 for the value of total exports and model 2 for the value of food and agricultural exports. The variables *exporterGDP*, *importerGDP*, $dIST_{ij}$, $comofflang_{ij}$ and $colonylink_{ij}$, $border_{ij}$, F_i *and* F_j are defined as follows:

exporterGDP: the GDP of the exporting country in billion US dollars

importerGDP: the GDP of the importing country in billion US dollars

DISTij :distance between *i* and *j*(km)

$$comofflangij \begin{cases} = 1 \textit{ if i and j have official common language} \\ = 0 \textit{ otherwise} \end{cases}$$

$$colonylinkij \begin{cases} = 1 \textit{ if i and j have a historical colony linkage} \\ = 0 \textit{ otherwise} \end{cases}$$

$$Borderij \begin{cases} = 1 \textit{ if i and j share a border} \\ = 0 \textit{ otherwise} \end{cases}$$

Fi :exporter fixed effects

Fj :importer fixed effects

Intra-regional dummies were also incorporated to capture the intra-regional effect on trade and are defined as follows:

$$sa\_intra_{ij} \begin{cases} = 1 \text{ if both } i \text{ and } j \text{ belong to South Asian countries} \\ = 0 \text{ otherwise} \end{cases}$$

$$eastasia\_intra_{ij} \begin{cases} = 1 \text{ if both } i \text{ and } j \text{ belong to East Asian countries} \\ = 0 \text{ otherwise} \end{cases}$$

$$gcc\_intra_{ij} \begin{cases} = 1 \text{ if both } i \text{ and } j \text{ belong to GCC} \\ = 0 \text{ otherwise} \end{cases}$$

$$eu\_intra_{ij}\begin{cases}=1 \text{ if both } i \text{ and } j \text{ belong to the EU}\\=0 \text{ otherwise}\end{cases}$$

$$sa\_gcc\_pair_{ij}\begin{cases}=1 \text{ if } i \text{ is a South Asian country and } j \text{ is a GCC country}\\=0 \text{ otherwise}\end{cases}.$$

$\beta 0$ is a constant term that accounts for the effects of unmeasured trade distortions on exports and the error term ε_{ijt} takes care of all the possible measurement errors; the error term is assumed to be independently and identically distributed. In order to preserve degrees of freedom resulting from arithmetic errors the zero export values were converted to very small positive numbers prior to log transformation.[6]

Using the coefficients estimated in the gravity model for food and agricultural trade, major SAARC countries' export potentials with GCC countries were estimated. The ratio of the export potential (P) as predicted by the model and actual exports (A) (P/A) was then used to analyze the export potential of South Asian countries with GCC countries in food and agricultural exports using the actual exports in the year 2012. If the value of P/A exceeds 1, then there is potential for expansion of exports with the respective country.

4 Data and Data Sources

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 is 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 1–24 were obtained from the TradeMap of International Trade Centre from 2007 to 2012. For the gravity analysis data, agricultural trade flows between country pairs were also retrieved from ITC TradeMap. Trade cost and cultural proximity variables were obtained from CEPII database. TradeMap gives many trade indicators including ITP at HS 6-digits level. However, for the purpose of brevity, ITP was calculated at HS 4-digits after

6 Although this option is a standard practice, it has recently been criticized on the ground that it assumes away the real zero trade between trade partners. This option deals with the zero trade as a missing data problem or a "statistical zero" and not as a real "no" trade issue. For further details, see Santos and Tenreyro (2006).

retrieving data from TradeMap. World Integrated Trade Solution (WITS) provides information on trade intensity. The data used for the gravity model estimation is for the year 2012 and cover 48 countries from the exporting side and 57 countries from the importing side (see Appendix H for full country coverage)

5 Results and Discussion

5.1 Trends and Patterns of GCC-SAARC Food and Agricultural Trade Flow

Being the largest countries that have the highest population in GCC, Saudi Arabia and UAE are the major importers of agricultural products accounting for about 80 % of the total agricultural imports of the region, indicating the dominance of Saudi Arabia and UAE in food and agricultural imports by GCC. Similarly, India dominates the food and agricultural exports by SAARC to GCC having the major share which was more than 70 % between 2007 and 2012 increasing to more than 80 % in 2012. From 2007 to 2012, India has consolidated it's dominant position while Sri Lanka, Pakistan and Nepal have lost a significant share of the SAARC food and agricultural Exports to GCC (See Appendixes A and G).

The structure of the food and agricultural imports by GCC is highly diversified and not concentrated on fewer goods as the import share is distributed among many of the commodities. Meat & edible offal of poultry meat (HS 2070) cereals such as rice (HS 1006) and barley (HS 1003), cane or beet sugar (HS 1701) and processed tobacco products such as cigars, cheroots, cigarillos & cigarettes (HS 2402) are the major agricultural product groups that contributed to the total imports by major shares. It is noteworthy that more than 50 % of the imports are contributed by many of other commodities indicating a lack of concentration over product groups in food and agricultural imports by GCC countries (See Appendix B).

Although the structure of the food and agricultural imports by GCC is diversified, the import sources are few and GCC imports are concentrated in few exporting countries. Table 1 shows that GCC imports are concentrated on few exporting countries for top ten product groups in food and agricultural exports. Apart from barley (HS 1003), cigars products (HS 2402), food preparations (HS 2106), wheat and meslin (HS 1001) and milk and cream products (HS 4020), for all the other top ten food and agricultural product groups GCC countries heavily depend on top three exporting countries where the concentration ratio for the top 3 markets (CR3) exceeds 89 %.

Table 1: CR3 of the top 10 food and agricultural commodities imported by GCC at HS 4-digits level – 2012 (over import source).

HS code	Commodity	Top 3 exporters to GCC	CR3 of GCC over import markets
2070	Meat & edible offal of poultry meat	Brazil, France and United States of America	94.04
1003	Barley	Ukraine, Australia and Canada	66.21
1006	Rice	India, Pakistan and Thailand	94.69
1701	Cane or beet sugar and chemically pure sucrose, in solid form	Brazil, India and UAE	90.16
2402	Cigars, cheroots, cigarillos & cigarettes	Germany, Switzerland and Turkey	71.10
4020	Milk and cream, concentrated or sweetened	Netherlands, New Zealand and Saudi Arabia	56.75
1001	Wheat and meslin	Australia, Germany and Canada	50.83
2106	Food preparations	Ireland, United States of America and Bahrain	57.41
1511	Palm oil & its fraction	Malaysia, UAE and Indonesia	95.10
2020	Meat of bovine animals, frozen	India, Brazil and Australia	89.87

Table 1 shows that in few commodities, SAARC countries are among the top three exporters for GCC. India and Pakistan are the first and second top exporters of rice (HS 1006) to GCC while India is among the top three exporters of meat of bovine animals (HS 2020) and sugar products (HS 1701) to GCC. However, in all the other seven-product groups of the top ten product groups imported by GCC none of the SAARC countries is listed among the top three exporters. Other important characteristic is that UAE, Saudi Arabia and Bahrain are among the top three exporters of sugar products (HS 1701), milk and cream (HS 4020), food preparations (HS 2106) and palm oil (HS 1511). This indicates the importance of UAE, Saudi Arabia and Bahrain as significant re-exporters given the restricted potential for the domestic production of above commodities for those countries.

Trade data show that cereals (HS 02) dominate the food and agricultural exports by SAARC to GCC having a share exceeding 40 % between 2007 and 2012. Appendix C shows the top 10 commodities exported by SAARC to GCC from 2010 to 2012 at HS 4 digits level. Table 2 shows the variability of the CR3 and CR5 over the period of 2010–2012 for the food and agricultural exports to GCC

Table 2: Concentration ratios of the top food and agricultural exports to GCC by SAARC: 2010–2012.

Year	CR3	CR5	Top five product groups at HS 4
2010	61.65	67.63	Rice (HS 1006), Meat of bovine animals; frozen (HS 0202), Tea (HS 0902), Brazil nuts, cashew nuts & coconuts (HS 0801), Dates, figs, pineapples, mangoes, avocadoes, guavas (HS 0804) and Meat of sheep or goats – fresh, chilled or frozen (HS 0204)
2011	53.93	62.45	Rice (HS 1006), Meat of bovine animals; frozen (HS 0202), Cane or beet sugar and chemically pure sucrose; in solid form (HS 1701), Tea (HS 0902) and Brazil nuts, cashew nuts & coconuts (HS 0801)
2012	51.17	57.96	Rice (HS 1006), Meat of bovine animals; frozen (HS 0202), Cane or beet sugar and chemically pure sucrose; in solid form (HS 1701), Wheat and meslin (HS 1001) and Tea (HS 0902)

countries by SAARC at HS 4 digits level. Accordingly, CR3 has decreased from 61% to 51% from 2010 to 2012. Rice (HS 1006), Meat and Bovine animals (HS 0202), Cane or beet sugar (HS 1701) and Tea (HS 0902) are top ranked product groups exported by SAARC to GCC countries in 2010 to 2012.

It is notable that in most of the commodities the importance of GCC as an importer from SAARC has been reduced gradually (Table 3). However, in the

Table 3: Top ten food and agricultural product groups exported by SAARC to GCC as a percentage of total agricultural exports by SAARC.

Product code HS 2-digits level	Product label	Agricultural exports of SAARC to GCC as a percentage of total food and agricultural exports of SAARC			
		2009	2010	2011	2012
10	Cereals	43.67	43.62	33.27	20.99
02	Meat and edible meat offal	7.1	9.71	7.31	6.37
09	Coffee, tea, mate and spices	8.15	9.3	6.96	4.16
08	Edible fruit, nuts, peel of citrus fruit, melons	7.75	7.59	5.73	4.06
17	Sugars and sugar confectionery	0.42	1.22	3.60	3.54
03	Fish, crustaceans, molluscs, aquatic invertebrates, nes	2.53	3.09	2.59	2.38
07	Edible vegetables and certain roots and tubers	3.58	4.11	2.73	1.88
23	Residues, wastes of food industry, animal fodder	2.13	2.08	1.79	1.41
24	Tobacco and manufactured tobacco substitutes	1.51	1.63	1.22	1.11
22	Beverages, spirits and vinegar	1.13	1.18	0.94	0.98

product group of sugars and sugar confectionary the trade dependence of SAARC on GCC has increased over time. In 2009, it was just 0.42% of total exports of this particular product group exported by SAARC went to GCC but in 2012 it was 3.54%.

Although the dependence on GCC markets for SAARC food and agricultural exports is diminishing with time, the dependence of GCC on SAARC food and agricultural exports has increased gradually. Table 4 shows that the reliance on SAARC food and agricultural exports increased between 2007 and 2012 in almost all the product groups. The only product group in which the reliance is reduced is edible vegetables and certain roots and tubers.

Table 4: Share of imports from SAARC countries in the total food and agricultural imports by GCC.

Product code	Product label	Share (%)				
		2007	2008	2010	2011	2012
09	Coffee, tea, mate and spices	28.97	28.71	30.86	32.92	40.14
03	Fish, crustaceans, molluscs, aquatic invertebrates nes	27.79	27.11	20.60	25.38	37.52
14	Vegetable plaiting materials, vegetable products nes	22.21	32.42	22.34	30.71	33.70
10	Cereals	31.03	40.72	40.02	38.22	32.29
11	Milling products, malt, starches, inulin, wheat gluten	9.78	16.77	7.90	32.19	26.22
23	Residues, wastes of food industry, animal fodder	7.58	12.13	17.17	22.96	24.00
08	Edible fruit, nuts, peel of citrus fruit, melons	13.33	13.55	13.89	15.03	18.16
07	Edible vegetables and certain roots and tubers	20.29	16.74	13.68	13.40	17.24
17	Sugars and sugar confectionery	7.00	24.64	2.69	11.46	16.80
13	Lac, gums, resins, vegetable saps and extracts nes	11.55	12.51	9.16	15.12	15.59
02	Meat and edible meat offal	14.26	13.12	14.74	13.18	14.91
	Share of total food and agricultural imports of GCC from SAARC	**12.61**	**17.62**	**13.70**	**14.03**	**14.77**

Table 5 shows the recent trend of the market share of agriculture as a whole and of the top 5 exported product groups by India, Pakistan and Sri Lanka who are the major SAARC exporters to GCC. The notable gainer in SAARC-GCC food and agricultural trade is India which has been able to increase market share in

Table 5: Top 5 food and agricultural product groups exported by each major SAARC exporting country to GCC (%).

HS code	Top 5 product groups exported by each country	Market share of each country of GCC's total food and agricultural imports from world		
		2010	2011	2012
	India			
	Agriculture	**9.12**	**10.48**	**12.06**
1006	Rice	53.36	65.07	68.43
0202	Meat of bovine animals, frozen	52.85	55.99	57.40
1701	Cane or beet sugar and chemically pure sucrose, in solid form	2.24	12.55	17.65
1001	Wheat and meslin	0.00	2.00	12.58
0801	Brazil nuts, cashew nuts & coconuts	76.64	72.91	86.41
	Pakistan			
	Agriculture	**2.73**	**2.66**	**2.38**
1006	Rice	23.90	20.00	19.91
0202	Meat of bovine animals, fresh or chilled	24.29	23.04	27.50
0204	Meat of sheep or goats – fresh, chilled or frozen	6.88	6.92	9.27
0804	Dates, figs, pineapples, mangoes, avocadoes, guavas	7.97	10.01	15.04
1701	Cane or beet sugar and chemically pure sucrose, in solid form	0.01	0.01	1.30
	Sri Lanka			
	Agriculture	**0.72**	**0.65**	**0.49**
0902	Tea	30.95	30.50	40.14
2106	Food preparations	1.22	2.62	2.90
0801	Brazil nuts, cashew nuts & coconuts	9.13	13.16	8.05
0803	Bananas and plantains, fresh or dried	0.80	1.56	3.76
2008	Preserved fruits	2.65	2.68	2.12

the imports of GCC of food and agricultural products from 9.12% in 2010 to 12.06% in 2012. India has consolidated its dominant position not only in agricultural exports as a whole but also in all the top 5 product groups exported.

With such insights into the recent trends and patterns of the food and agricultural trade between SAARC and GCC it is useful to investigate into the trade potential between these regions. For this purpose, this particular study used the Indicative Trade Potential (ITP) calculated at HS 4 level of the food and agricultural exports of SAARC to GCC. Appendix D shows the top 20 food

and agricultural product lines with the highest ITP. Accordingly, sugar products (HS 1701) have the highest ITP followed by wheat and meslin (HS 1001). Inter regional trade of rice which is ranked seventh according to the magnitude of the ITP is in a strong position. This can be explained by the Relative Indicative Trade Potential (RITP). When RITP reaches zero it means that one of the trade partner relies heavily upon the other. Accordingly 88 % of GCC rice (HS 1006) imports are from SAARC countries and RITP values is 3, which indicates that SAARC has become the niche source for rice for GCC. Hence, the future stability of rice supply to GCC will deeply depend on the trade relations between SAARC and on the rice export performance of SAARC countries.

Though as a region SAARC has a substantial ITP in many agricultural product lines at HS 4 digit level, currently these commodities are exported mainly by India to GCC. Table 6 shows that except for animal or vegetable fats in the other four of the top five commodities with highest ITP India has a market share exceeding 90 %. Hence, it can be concluded that India has a better chance to tap this trade potential by bolstering trade relationships with GCC countries. From the top 5 product lines with the highest ITP, in exporting cane or beet sugar (HS 1701), wheat and meslin (HS 1001), Maize (1005) and coffee (0901) to GCC, SAARC countries are taxed at zero rates. Only in animal or vegetable fats (HS 1516), SAARC countries are taxed at 5 % rate. Therefore, it can be concluded that SAARC countries face a conducive tariff structure to tap the trade potential for most of the product groups with highest ITP.

Table 6: Share of member countries of SAARC in exports of product lines with highest ITP in 2012.

Product code HS 4-digit level	Product group	Share of SAARC exports to GCC-2012		
		India	Pakistan	Sri Lanka
1701	Cane or beet sugar and chemically pure sucrose, in solid form	93.15	6.85	0.00
1001	Wheat and meslin	99.25	0.75	0.00
1005	Maize (Corn)	94.45	5.55	0
0901	Coffee	99.95	0	0.05
1516	Animal or vegetable fats, oils & fractions, hydrogenated	76.17	23.83	0

Another good indicator of the potential of SAARC member countries to exploit emerging trade opportunities with GCC countries is the trade intensity index. According to Table 7 India has all the GCC countries within the top 40 countries with the highest trade intensity index for agricultural trade while Oman is the trade partner with the 10th highest trade intensity index for agricultural trade. Pakistan has UAE as 4th highest trade partner in agricultural trade intensity index however the trade relationships with Oman, Qatar and Saudi Arabia are ranked as lower as 106th, 113th and 116th respectively (See Appendix E). When Sri Lanka is considered the trade relationships between GCC countries is satisfactory when compared to Pakistan but still for most of the GCC countries are ranked below 50. It is noteworthy that of the countries in the top 10 list with higher trade intensity index are Arab states (Syria, Iraq) and Iran, but none of the GCC country is in that list for agricultural trade (See Appendix F).

Table 7: Trade partners with top 10 trade intensities and trade intensities of GCC countries for India 2012.

Rank	Trade Partner (Total Trade)	Trade Intensity Index (Total Trade)	Rank	Trade Partner (Agricultural Trade)	Trade Intensity Index (Agricultural Trade)
1	Bhutan	3,271.99	1	Bhutan	3,221.55
2	Nepal	2,961.89	2	Nepal	2,563.96
3	Kenya	1,478.01	3	Bangladesh	866.92
4	Sri Lanka	1,464.50	4	Sri Lanka	862.5
5	Bahamas	1,276.02	5	Somalia	835.96
6	Somalia	1,107.01	6	Maldives	793.48
7	Tanzania	1,072.73	7	Guinea	664.89
8	Uganda	1,026.29	8	Senegal	663.04
9	UAE	998.87	9	Liberia	639.14
10	Mauritius	987.37	10	Oman	619.10
15	Oman	693.14	13	Kuwait	595.81
27	Bahrain	396.89	14	Qatar	556.27
31	Saudi Arabia	376.4	17	UAE	537.02
40	Kuwait	307.79	29	Bahrain	371.99
55	Qatar	211.46	34	Saudi Arabia	319.5

5.2 Results of the Estimation of the Gravity Model

The descriptive statistics and the data sources of the gravity variables are given in Table 8 while the OLS estimates of the models are presented in Table 9.

Table 8: Descriptive statistics of the variables used in gravity estimation.

Variable	Units	Source of data	Mean	Standard deviation
Value of total exports	US Dollar '000	Trademap	4,267,000.97	24,689,000.02
Value of food and agricultural exports	US Dollar '000	Trademap	479,709.58	2,618,998.31
Distance	Kilometers	CEPII	6981.72	4448.99
Common language – official (dummy)	Na	CEPII	Na	Na
Colony link (dummy)	Na	CEPII	Na	Na
Intra regional linkages (dummy)	Na	World Bank	Na	Na

Table 9: Results of gravity analysis for total and food and agricultural trade flows of all countries.

Variables	Total trade	Food and agricultural trade
ln_export GDP	1.342*** (0.027)	2.475*** (0.083)
ln_import GDP	1.085*** (0.021)	1.427*** (0.064)
ln-distance	−0.941*** (0.077)	−1.372*** (0.234)
comofflang dummy	0.888*** (0.176)	3.000*** (0.530)
colonylink dummy	0.435* (0.281)	2.243** (0.851)
border dummy	0.494 (0.271)	0.006 (0.821)
sa_intra dummy	0.551 (0.777)	4.473 (2.347)
eastasia_intra dummy	1.059*** (0.325)	3.021*** (0.982)
eu_intra dummy	0.653*** (0.21)	2.561*** (0.634)
gcc_intra dummy	1.225 (0.865)	3.074 (2.613)
sa_gcc dummy	1.318** (0.443)	3.489** (1.337)
Constant	−1.345* (0.674)	−5.121** (2.035)
No. of Observations	3,106	3,106
R^2	0.63	0.334

Notes: *** Significant at 1 % probability level; ** significant at 5 % probability level; *significant at 10 % probability level. Values between parentheses are standard errors. The model is estimated without "country fixed effects" in order to be able to estimate the GDP's effects. Introducing fixed effects would lead to perfect collinearity with the GDP's variables and the impossibility to separately identify their effects.

The coefficient estimates of the gravity models specified indicate the elasticity estimates with regard to different continuous variables in log form. According to the results, the GDP variables (exporter GDP and importer GDP) are highly significant and have the expected signs in both equations (total exports,

Agricultural exports). Likewise, all the standard trade variables, distance, common official language dummy, and colony link dummy have the expected signs and significant effects on the value of both total and food and agricultural exports. The common border has the expected sign but not significant at the conventional statistical levels. The intra-regional dummies have the expected positive effects on export flows in both the total exports and agricultural exports equations. However, only the South Asia–GCC and the EU-intra dummies have a significant effect on total exports and on food and agricultural exports. The positive and the significant effect of the South Asia-GCC variable suggests that both regions are "natural trading partners" and trade flows could be enhanced by the formation of a formal Regional Trade Arrangement between the two regions.

Table 10 shows the South Asian countries' estimated export potential with GCC countries. Comparatively, India has the highest export potential with Qatar, followed by Saudi Arabia, Kuwait and Oman. It indicates that India could potentially increase its exports to all these countries more than what is currently traded. The export potential index for all other trading pairs is less than one, indicating that there is no export potential for SAARC countries to GCC more than what is actually traded.

Table 10: Major SAARC countries' export potential to GCC countries.

Exporting country	Importing country	Actual export (Value in '000 US$) Year 2012	Potential export (Value in '000 US$) Year 2012	Export potential
India	Bahrain	90,270	48,174.25	.53
India	Kuwait	436,761	609,366.92	1.40
India	Oman	291,859	321,946.77	1.1
India	Qatar	204,543	755,629.80	3.69
India	Saudi Arabia	1,425,207	4,222,228.93	2.96
India	United Arab Emirates	1,983,290	2,267,215.94	1.14
Pakistan	Bahrain	50,766	351.74	0.01
Pakistan	Kuwait	44,320	4,625.63	0.10
Pakistan	Oman	121,990	2,176.55	0.02
Pakistan	Qatar	61,732	5,431.90	0.09
Pakistan	Saudi Arabia	242,993	29,956.68	0.12
Pakistan	United Arab Emirates	374,047	16,016.30	0.04
Sri Lanka	Bahrain	1,348	6.25	0.00
Sri Lanka	Kuwait	29,233	76.26	0.00
Sri Lanka	Oman	2,065	38.59	0.02
Sri Lanka	Qatar	5,853	99.47	0.02
Sri Lanka	Saudi Arabia	36,473	609.58	0.02
Sri Lanka	United Arab Emirates	105,258	289.94	0.00

6 Conclusions

According to the obtained results, the structure of the food and agricultural imports by GCC is highly diversified as the import share is distributed among many of the commodities. However the export sources are few and GCC imports are concentrated in few exports markets as GCC countries heavily depend on top three countries for most of the food and agricultural imports resulting in a CR3 ratio exceeding 80 %. In few commodities, SAARC countries are among the top three exporters for GCC. India and Pakistan are the first and second top exporters of rice to GCC while India is among the top three exporters of meat of bovine animals and sugar products.

When the concentration of food and agricultural exports of SAARC to GCC over product groups is considered, CR3 decreased from 61 % to 51 % from 2010 to 2012. It can be concluded that the overall trade pattern of SAARC with GCC has undergone a significant change recently diminishing the relative importance of the GCC region to SAARC as an importer of food and agricultural products. However, the dependence of GCC on SAARC food and agricultural exports has increased gradually. The overall dependence of the GCC on SAARC food and agricultural exports has increased from 13 % to 15 % from 2007 to 2012. Further, all the top 20 product lines with highest indicative export trade potential for SAARC countries have a value exceeding 100 million US dollars. The Indian dominance in food and agricultural exports and India's higher trade intensity with GCC countries will put India in an advantageous position relative to other SAARC member countries. The results of the estimation of the gravity equation indicate that the conventional trade cost variables have significant effects on total and food and agricultural trade. According to results of simulated export potential, among the major SAARC exporting countries, India has the highest potential for increasing food and agricultural exports to GCC countries. Further economic cooperation between the GCC and India in the form of a regional integration scheme, for example, would hence enhance trade and food security in the GCC region.

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Appendices

Appendix A: Country Share of Total GCC Food and Agricultural Imports (%)

Country	Percentage of total agricultural imports by GCC				
	2008	2009	2010	2011	2012
Saudi Arabia	38.82	42.12	45.63	46.66	43.23
UAE	33.25	37.34	32.28	33.68	36.04
Oman	7.73	7.69	6.10	6.15	7.95
Kuwait	11.31	9.07	7.24	7.28	7.10
Qatar	5.27	n/a	5.41	2.78	3.41
Bahrain	3.62	3.77	3.33	3.45	2.27
GCC Aggregation	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Appendix B: The Composition of Total GCC Food and Agricultural Imports (%)

HS code	Product groups	Percentage of total agricultural imports				
		2007	2008	2010	2011	2012
2070	Meat & edible offal of poultry meat	5.69	6.80	6.50	7.18	7.51
1003	Barley	8.87	9.74	5.46	5.01	6.32
1006	Rice	6.39	12.10	7.85	6.95	6.19
1701	Cane or beet sugar and chemically pure sucrose, in solid form	3.69	2.68	5.13	5.12	5.17
2402	Cigars, cheroots, cigarillos & cigarettes	3.84	2.84	3.98	4.30	4.76
4020	Milk and cream, concentrated or sweetened	5.27	5.64	4.00	4.46	4.70
1001	Wheat and meslin	1.57	2.39	2.41	3.01	4.17
2106	Food preparations	3.36	2.33	3.14	3.27	2.54
1511	Palm oil & its fraction	1.92	2.37	2.62	3.02	2.23
2020	Meat of bovine animals, frozen	1.39	1.45	1.68	1.63	2.06
	Rest of Commodities	58.01	51.66	57.22	56.05	54.35
	Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Appendix C: Top 10 Food and Agricultural Exports by SAARC to GCC at HS 4 Digits Level from 2010 to 2012

2010			2011			2012		
HS code	Product group	% of total agricultural exports from GCC-SAARC	HS code	Product group	% of total agricultural exports from GCC-SAARC	HS code	Product group	% of total agricultural exports from GCC-SAARC
1006	Rice	48.05	1006	Rice	42.68	1006	Rice	36.70
0202	Meat of bovine animals, frozen	7.07	0202	Meat of bovine animals, frozen	6.63	0202	Meat of bovine animals, frozen	7.91
0902	Tea	6.53	1701	Cane or beet sugar and chemically pure sucrose, in solid form	4.63	1701	Cane or beet sugar and chemically pure sucrose, in solid form	6.55
0801	Brazil nuts, cashew nuts & coconuts	3.26	0902	Tea	4.61	1001	Wheat and meslin	3.54
0804	Dates, figs, pineapples, mangoes, avocadoes, guavas	2.73	0801	Brazil nuts, cashew nuts & coconuts	3.91	0902	Tea	3.26
0204	Meat of sheep or goats – fresh, chilled or frozen	2.21	2304	Soya-bean oil-cake and other solid residues	2.17	0801	Brazil nuts, cashew nuts & coconuts	3.15

(*continued*)

(*continued*)

2010			2011			2012		
HS code	**Product group**	**% of total agricultural exports from GCC-SAARC**	**HS code**	**Product group**	**% of total agricultural exports from GCC-SAARC**	**HS code**	**Product group**	**% of total agricultural exports from GCC-SAARC**
2304	Soya-bean oil-cake and other solid residues	2.08	0306	Crustaceans	2.07	0306	Crustaceans	2.83
0306	Crustaceans	1.79	0804	Dates, figs, pineapples, mangoes, avocadoes, guavas	1.90	2304	Soya-bean oil-cake and other solid residues	2.47
0910	Ginger, saffron, turmeric, thyme, bay leaves & curry	1.56	0910	Ginger, saffron, turmeric, thyme, bay leaves & curry	1.90	0204	Meat of sheep or goats – fresh, chilled or frozen	2.19
0703	Onions, garlic and leeks, fresh or chilled	1.52	1101	Wheat or meslin flour	1.89	0201	Meat of bovine animals, fresh or chilled	2.16
	Rest of products	**23.21**		**Rest of products**	**27.63**		**Rest of products**	**29.22**
	Total	**100.00**		**Total**	**100.00**		**Total**	**100.00**

Appendix D: Top 20 Product Lines (HS 4) with the Highest Indicative Trade Potential in 2012

Product code	Product group	Market share of GCC in SAARC exports %	Market share of SAARC in GCC imports %	Indicative trade potential	Relative indicative potential trade
1701	Cane or beet sugar and chemically pure sucrose, in solid form	16.41	18.77	1,899,066	87
1001	Wheat and meslin	12.25	11.22	1,231,383	88
1005	Maize (corn)	2.95	4.93	701,569	57
0202	Meat of bovine animals, frozen	14.60	57.34	322,449	11
0901	Coffee	6.94	12.98	285,481	47
1516	Animal or vegetable fats, oils & fractions, hydrogenated	1.30	3.99	281,933	99
1006	Rice	24.94	87.89	275,696	3
1515	Fixed vegetable fats & oils & their fractions	0.83	2.27	274,051	36
1905	Bread, biscuits, wafers, cakes and pastries	8.56	3.56	273,867	91
0703	Onions, garlic and leeks, fresh or chilled	23.30	27.13	197,132	63
2304	Soya-bean oil-cake and other solid residues	6.65	42.10	189,934	9
0713	Dried vegetables, shelled	14.58	11.03	179,862	85
2309	Animal feed preparations, nes	1.27	1.47	178,564	85
2106	Food preparations, nes	25.05	5.81	162,367	75
0805	Citrus fruit, fresh or dried	13.71	4.87	157,671	86
2101	Extracts essences & concentrates of coffee and tea	1.99	5.05	126,099	37
0302	Fish, fresh, whole	19.62	15.68	121,399	80
0806	Grapes, fresh or dried	23.18	28.01	110,043	60
0303	Fish, frozen, whole	4.41	26.02	109,848	13
2207	Ethyl alcohol & other spirits (if undenatured then higher than 80 %	8.35	18.63	109,808	36

Appendix E: Trade Partners with Top 10 Trade Intensities and Trade Intensities of GCC Countries for Pakistan 2012

Rank	Trade partner (total trade)	Trade intensity index (total trade)	Rank	Trade partner (agricultural trade)	Trade intensity index (agricultural trade)
1	Afghanistan	17,466.87	1	Afghanistan	18,397.69
2	South Sudan	15,461.09	2	Angola	144.32
3	Comoros	11,089.36	3	Albania	54.16
4	Somalia	4,272.25	4	UAE	801.88
5	Guinea-Bissau	2,307.03	5	Argentina	11.58
6	Madagascar	2,012.10	6	Armenia	5.32
7	Lesotho	1,901.39	7	American Samoa	39.22
8	Bangladesh	1,571.02	8	Australia	67.46
9	Sri Lanka	1,359.59	9	Austria	0.76
10	Sierra Leone	1,287.73	10	Azerbaijan	146.17
13	UAE	943.49	15	Bahrain	1,693.02
18	Bahrain	521.27	77	Kuwait	482.73
19	Oman	508.11	106	Oman	2,103.35
25	Kuwait	286.78	113	Qatar	1,355.46
26	Qatar	283.37	116	Saudi Arabia	433.69
31	Saudi Arabia	236.07			

Appendix F: Trade Partners with Top 10 Trade Intensities and Trade Intensities of GCC Countries for Sri Lanka 2012

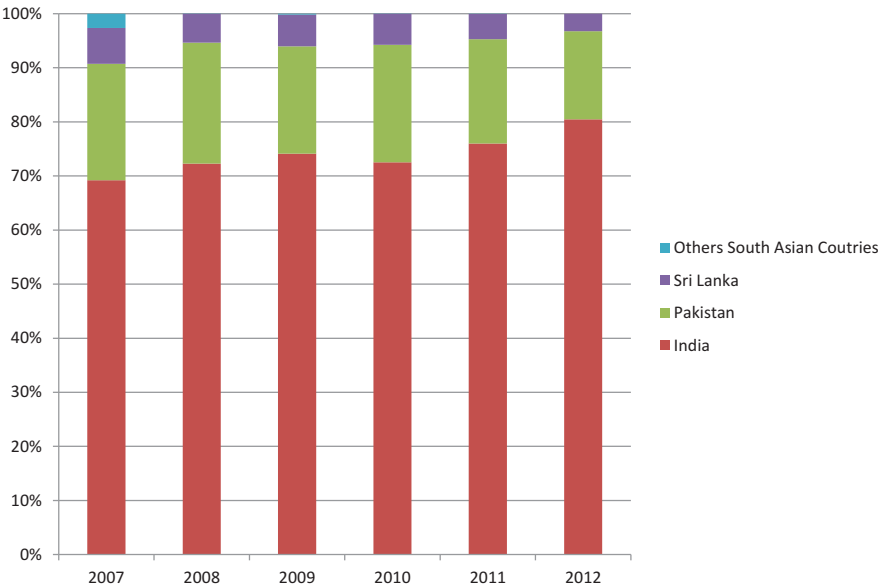
Rank	Trade partner (total trade)	Trade intensity index (Total trade)	Rank	Trade partner (agricultural trade)	Trade intensity index (agricultural trade)
1	Maldives	5,794.99	1	Maldives	11,247.32
2	Syria	2,788.85	2	Syria	2,605.64
3	Azerbaijan	1,364.30	3	Swaziland	1,104.79
4	Iran	1,049.35	4	Iran, Islamic Rep.	678.88
5	Libya	807.21	5	Libya	657.72
6	Tokelau	797.57	6	Azerbaijan	608.23
7	Jordan	737.63	7	Pakistan	520.26
8	Kuwait	611.56	8	Seychelles	491.28

(*continued*)

(*continued*)

Rank	Trade partner (total trade)	Trade intensity index (Total trade)	Rank	Trade partner (agricultural trade)	Trade intensity index (agricultural trade)
9	Iraq	604.05	9	Jordan	472.44
10	Pakistan	585.49	10	Iraq	458.83
24	UAE	195.15	14	Kuwait	348.09
51	Bahrain	86.63	16	UAE	434.56
53	Oman	85.89	27	Qatar	242.25
54	Saudi Arabia	83.82	54	Saudi Arabia	83.82
61	Qatar	74.32	60	Bahrain	84.12
			66	Oman	67.21

Appendix G: Food and Agricultural Exports to GCC by SAARC Countries: 2007–2012



Appendix H: Country Coverage in the Gravity Model Estimation

Exporting Countries	Number	Importing countries	Number
South Asian Countries	4	**South Asian Countries**	6
India		Bangladesh	
Sri Lanka		Nepal	
Maldives		India	
Pakistan		Sri Lanka	
		Maldives	
		Pakistan	
GCC Countries	6	**GCC Countries**	6
Bahrain		Bahrain	
Kuwait		Kuwait	
Oman		Oman	
Qatar		Qatar	
UAE		UAE	
Saudi Arabia		Saudi Arabia	
Other countries	38	**Other countries**	57
Armenia		Australia	
Australia		Azerbaijan	
Austria		Belgium	
Azerbaijan		Brazil	
Belgium		Canada	
Brazil		China	
Brunei Darussalam		Czech Republic	
Cambodia		Finland	
Canada		France	
China		Georgia	
Czech Republic		Germany	
Denmark		Hong Kong	
Fiji		Hungary	
Finland		Iceland	
France		Indonesia	
Georgia		Japan	
Georgia		Kazakhstan	
Germany		Luxembourg	
Greece		Macao	
Hong Kong SAR		Malaysia	
Hungary		Mexico	
Iceland		Netherlands	
Indonesia		New Zealand	
Islamic Republic of Iran		Philippines	
Italy		Poland	
Japan		Portugal	
Kazakhstan		Russia	

(*continued*)

(*continued*)

Exporting Countries	Number	Importing countries	Number
Kiribati		Samoa	
Korea		Singapore	
Kyrgyz Republic		Slovak Republic	
Lao P.D.R.		South Africa	
Luxembourg		Spain	
Macao		Switzerland	
Malaysia		Thailand	
Mexico		Turkey	
Mongolia		United Kingdom	
Netherlands		USA	
New Zealand			
Papua New Guinea			
Philippines			
Poland			
Portugal			
Russia			
Samoa			
Singapore			
Slovak Republic			
Solomon Islands			
South Africa			
Spain			
Sweden			
Switzerland			
Thailand			
Tonga			
Turkmenistan			

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