

Export Diversification and Intensive Margin of Processed Food Exports in Sri Lanka

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Abstract

If a country is to have a high status in Export earning, that country should have a particular export structure. They should continuously improve the exports and find new markets through research. Also they should take steps to increase the quantity of current exports. In this study, we have studied the reduction in exports earning income as a percentage of Gross Domestic Product during the period from 2001-2012. Especially we have tried to identify the slow growth in export diversification has contributed to this. We have analyzed Intensive margins using major agricultural export countries of which the annual export earning is more than US\$ 5000 from 2001-2012 periods. Further, Harmonized System code 07 product items are analyzed in this study. Main finding of this research is most Sri Lanka is not successful in using product diversification and geographical diversification to diversify its processed foods exports. Also Sri Lanka tries to increase the volume of current processed food exports to increase its export earnings.

Keywords: export diversification, intensive margin, export earning, processed food

Introduction

Export Diversification is very essential for developing countries. If a country concentrates its trading efforts only on certain products and on trade with a selected group of countries, the country may have a unstable revenue from trade.

Many researchers have stressed the increasing viability of exporting processed food such as, “Changes in internationalization of food habits have been shaped mainly by rising incomes, growing health acquaintance, and urbanization. Factors such as international migration, communication revolutions, and international tourism also contribute to the meal upgrades. In addition, declines in tariff and nontariff barriers, through many rounds of international negotiations both in developed and developing countries have facilitated the expansion of processed food trade” (Jongwanich, 2009).

Diop and Jaffree (2005) have identified higher spoilage and handling cost make fresh products much more expensive to transport: in contrast processed products are easier to handle and are almost universally shipped by sea, transport costs are smaller, make the geographical outreach of processed food trade much larger in this era.

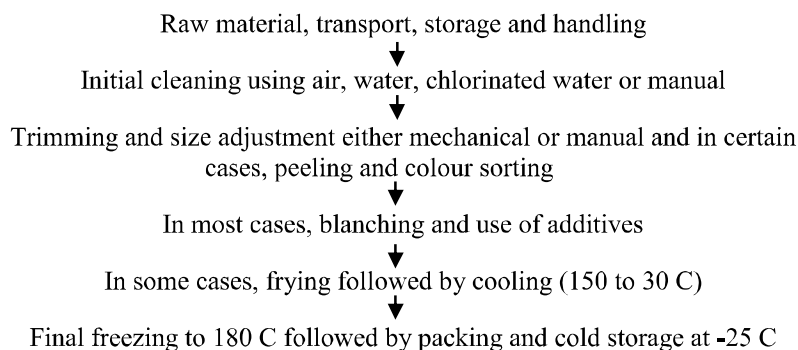
In case of food industries, diversification might take the form of moving downstream into food processing, or beginning the production of new types of food products. The former strategy for adding values to basic food commodities. Forms of processing include preservation (canning, pickling, drying, freezing, ect.) and the transformation of raw materials into new products. According to United Nations Conference on Trade and Development (UNCTAD) 1998, this strategy faces following obstacles; First, Tariff barriers in developed countries are frequently higher for processed food products than for unprocessed food products. Secondly, Food processing industries are well established in the industrialized countries wishing to expand in to this field must either attract Foreign Direct Investments (FDI) from the small number of companies that have a dominant role in activities such as food canning, or attempt to compete directly against transnational companies with strong supply relationships, brands and distribution networks and thirdly, the economies of scale in certain areas of food processing are considerable.

Theoretical Framework of Food Processing

Food processing can be defined as any deliberate change in a food that occurs before it's available for consuming. It can be as simple as freezing or drying food to preserve nutrients and freshness, or as complex as formulating a frozen meal with the right balance of nutrients and ingredients.

In Sri Lanka processed food sector includes prepared and preserved gherkins, miscellaneous edible preparations, herbal powder, herbal tea, sausages, sauces, milk and cream and soya based products, coconut milk, cream and powder, various types of fruit juices, frozen and canned vegetables as key exported items under processed vegetables, fruits and juices category.

Kalbassi (1981) identified stages of process which influence final quality of most frozen processed food as follows,



Objectives of the Study

Following above researches and studies my objective is to identify market diversification, product diversification and value addition trends in processed food exports in Sri Lanka from 2001 to 2012, under Harmonized System 07 product code.

Materials and Methods

Export diversification has been measured using Extensive and Intensive margins. The Intensive margin of trade refers to the growth of exports in goods that are already being exported. We can term these are “Old Products”. The Extensive margin is defined as the growth of exports in new categories. We can call these “New Products”. This study followed only Intensive Margin approach in examining the issue of export diversification in processing foods.

The intensive margin: the bilateral trading relationship already exists and that may increase through time measures the extent of relationship that survive and deepen over time. (Besedes and Prusa, 2008)

Bilateral intensive margin is defined by Feenstra (1994), Hummels and Klenow (2005) and Colacelli (2009) as the weighted count of the sectors in which the exporter exports to the importer in a given year, and bilateral intensive margin defined exports from the exporter to the importer relative to total exports to the importer (excluding exporter’s exports) in relevant sectors in which the exporter exports to the importer in a given year.

Equation for Intensive Margin

$$IM_{ijt} = \frac{\sum Exports_{ijt}^s}{SE_{ijt}^s} \cdot \frac{\sum Exports_{kjt}^s}{SE_{ijt}^s}$$

Where exporter i , importer j , year t , the sectors s and k is the “rest of the world” by including all exporters to j except for i .

Trend and Patterns of World Processed Food Trade

As shown if figure 1, share of processed food exports in total world food exports increased from 44 percent in 1980 to around 63 percent in 2006. The growth of share in processed food exports mainly contributed by low and middle income countries after 1995. Figure 2 shows the share of processed food exports in world agriculture exports increased up to 51 percent in 2006 from 32 percent in 1980. Therefore, booming trend can be identified in world processed food trade and pattern of higher contribution of low and middle income countries to the growth of share in processed food exports can be seen after 1995 period. According to Huang (2004) Trade of developing countries in specific processed products is highly concentrated and very low product diversification can be seen.

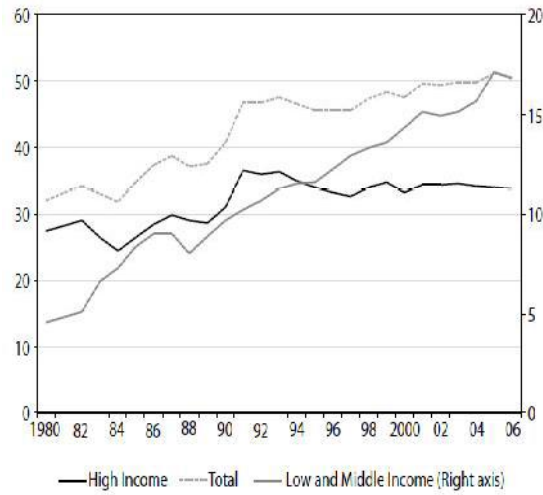


Figure 1: Share of processed Food Exports in Total World Food Exports (as a percentage)

Source: ITC calculations based on UN COMTRADE statistics

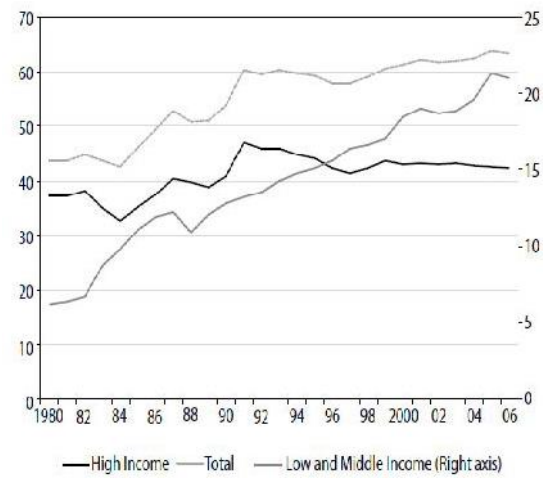


Figure 2: Share of processed Food Exports in Total World Agriculture Exports (as a percentage)

Source: ITC calculations based on UN COMTRADE statistics

Analysis of HS 07 Edible Vegetables and Certain Roots and Tubers

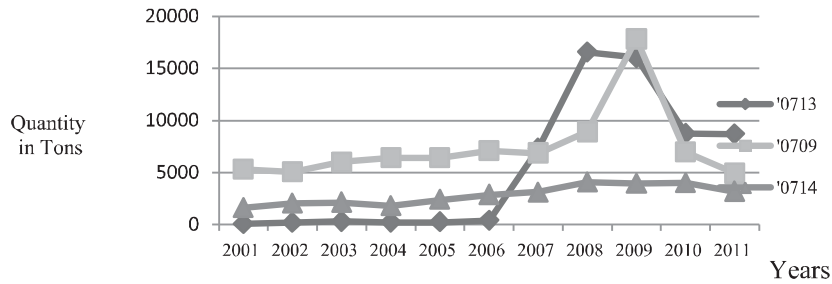


Figure 3: Exported Quantity of HS 0713, HS 0709 and HS 0714
 Source: Author’s calculations based on UN COMTRADE data

According to the figure 3 exports quantity of HS code 0713: Dried vegetables, shelled category has increased dramatically till 2010, from 52 tons in 2001 to 16019 tons in 2010, and decreased up to 8698 tons in 2012. HS 0709: Vegetable nes, fresh or chilled exports has increased slightly from 5304 tons in 2002 to 8892 tons in 2009, and up by 100.22 percent in 2010 to 17804 tons. But again the export quantity dropped to 6945 tons in 2011 and further decreased up to 4902 tons in 2012. Exports of HS 0714: Manioc, arrowroot Salem (yams) etc fluctuated around 1630 tons to 4055 tons during the 2001-2012 periods.

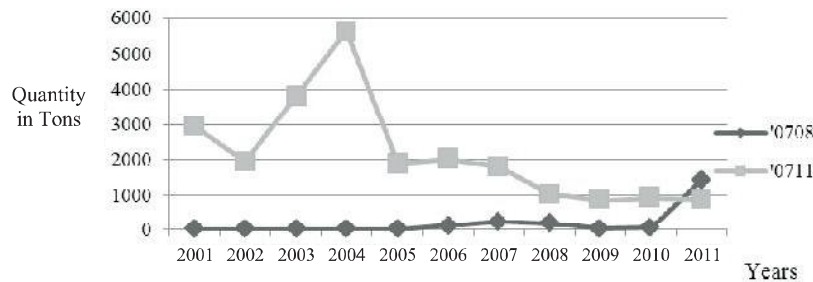


Figure 4. Exported Quantity of HS 0708 and 0711
 Source: Author’s calculations based on UN COMTRADE data

Figure 4 shows HS 0708: Leguminous vegetables, shelled or unshelled, fresh or chilled exports remained at low level (range of 14 tons to 1 ton) from 2001 to 2006. But the exported quantity grew sharply by 4033.33 percent by 2007, from 3 tons in 2006 to 124 tons in 2007. Further the quantity exported was increased 221 tons in 2008 (78.23 percent growth in the quantity of exports). By 2010 the quantity of export dropped sharply to 39 tons recording -79.26 percent decrease. But again in 2012, there is a significant growth can be seen in HS 0708 product label which recorded 1429 exported tons recording 2363 growth in quantity when compared to the previous year. HS 0711: Vegetables, provisionally preserved (unfit for immediate consumption) exports gradually increased 1948 tons in 2001 to 5639 tons in 2005, but in 2006 the amount of exports dropped to 1880 tons showing -66.66 percent decrease. From 2008, the exports of that sector gradually decreased 1811tons to 1026 tons

and further to 873 tons, and slightly increased up to 918 tons and again decreased to 900 tons in 2008, 2009, 2010, 2011 and 2012 respectively.

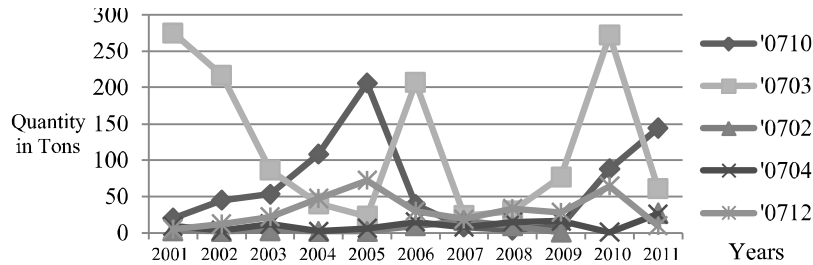


Figure 5. Exported Quantity of HS 0710, HS 0703, HS 0702, HS 0704 and HS 0712

Source: Author’s calculations based on UN COMTRADE data

Exports amount of HS 0710: Frozen vegetables highly fluctuated during 2001-2012 period, (range 4 tons to 206 tons) showed an increasing trend after 2009. HS 0703: Onions, garlic and leeks, fresh or chilled product label exports also fluctuated within the period and showed decreasing trend in year 2012. Tomatoes: bearing HS 0702, exported in fewer quantities ranged 27 tons to 1 ton.

As shown figure 5, exports of all other HS codes from 0704 to 0705 were recorded fewer quantities. Specially HS 0707: Cucumber and gherkins fresh or chilled and HS 0705: Lettuce and chicory fresh or chilled products were losing exporting quantities.

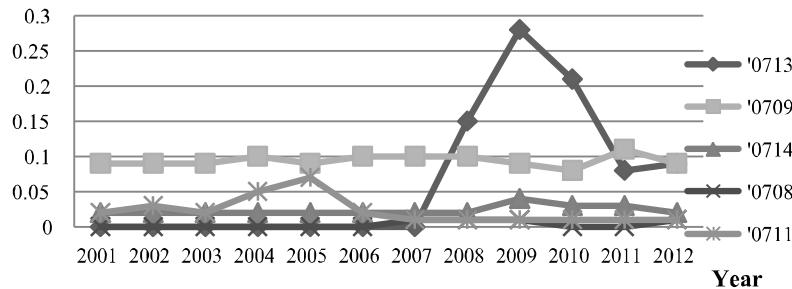


Figure 6. Share in Value in Country's Cluster Exports

Source: Author’s calculations based on UN COMTRADE data

According to Figure 6, the value of 0705 Lettuce and chicory, fresh or chilled were increased significantly in the cluster of country’s export value during 2007-2009 periods. But it gradually decreased from 2009 to 2012 from 0.28 percent to 0.09 percent. HS 0709: Vegetables nes, fresh or chilled contributed second large value in HS 7, in share in value in country’s cluster exports, showed somewhat stable position. Except those, there is no any other significant increase in all other product labels as the share in value in country’s cluster exports.

List of Importing Markets

Table1. Exported value in US Dollar thousand

Importers	2001	2002	2003	2004	2005	2006	2007	2008	2009	2011	2012
World	6486	6935	7134	9668	11570	9830	11257	25092	30721	24023	21418
Maldives	2302	1933	1953	2314	1941	2699	3194	3448	2429	4348	3833
United Arab Emirates	931	1054	1146	1072	1158	1291	1541	5387	11219	6063	2804
Area Nes	17	0	0	0	0	0	0	0	0	0	2202
Sudan	0	0	0	0	0	0	0	1434	0	389	1759
India	0	20	34	98	49	35	42	0	1950	172	1662

Source: ITC calculations based on UN COMTRADE statistics

By 2012, Maldives is major importer of edible vegetables and certain roots and tubers exported by Sri Lanka, followed by United Arab Emirates, Area Nes (municipality in Buskerud county, Norway), Sudan, and India respectively.

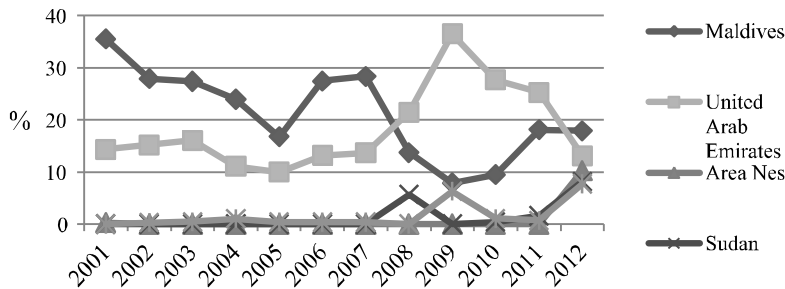


Figure 7. Export Share of the Revenue by Exporting Markets for HS 07

Source: Author’s calculations based on UN COMTRADE data

Sri Lanka earned 35 percent of exported value by exporting edible vegetables and certain roots and tubers to Maldives in 2001 and the value gradually decreased up to 17 percent in 2012. The main cause for the decrease was the increase of world revenue from 6486 US Dollar thousand in 2001 to 21418 US Dollar thousand in 2012. Exports revenue of second importing market: United Arab Emirates fluctuated in between 2001 to 2012. In 2009 exported share of the revenue increased up to 36 percent and after it decreased drastically to 13 percent by 2012. Area nes, Sudan and India recorded very low share of exported revenue and showed an increasing trend in export value in share by the end of 2012.

Furthermore, Area Nes, Sudan, Turkey, Islamic Republic of Iran, Thailand, South Africa, Swaziland, Bosnia and Herzegovina and Cyprus became new exporting destinations of Sri Lanka. This can be regarded as catering “Old Products” to “New Market Destinations” under

geographical diversification of exporting items. Nevertheless, Sri Lanka is gradually losing the export markets of Lebanon, Netherlands, Democratic Republic of the Congo, Spain and Denmark.

Intensive Margin of trade for Maldives is gradually declining from 2001 to 2012. That shows the already existing bilateral trading relationship between Sri Lanka and Maldives for above product is gradually decreasing. But intensive margin of trade for United Arab Emirates and Area nes showed an increasing trend while the intensive margin of trade for India and Pakistan fluctuates. United Arab Emirates shows increasing importing market penetration for above three years period. Area nes: a new market destination of Sri Lanka recorded intensive trade margin of 0.8886 in 2012. India's importing market competitiveness for the products imported by Sri Lanka grew in 2011 and again dropped in 2012. Intensive margin of Pakistan was fluctuated within the period and showed an increasing trend by 2012.

Table 2. Calculation of Intensive Margins for Top Five Importing Markets

Country	Sri Lanka's exporting position among other exporting countries by 2012	Intensive Margin of trade product: 07 Edible vegetables and certain roots and tubers											
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Maldives	3 rd	0.49056	0.41628	0.34645	0.38053	0.3495	0.3534	0.3312	0.3332	0.2912	0.2715	0.2664	0.2487
United Arab Emirates	21 st					0.00049		0.00546	0.00758				
Area Nes	1 st	0.00045											0.8885
India	46 st	0.00016	0.00002				0.00004			0.00006	0.00026	0.00103	0.00027
Pakistan	23 rd			0.00109		0.00175	0.00052	0.00003	0.00001	0.00125	0.00064	0.00023	0.00293

Source: Author's calculations based on UN COMTRADE data

Conclusion and Suggestions

Sri Lanka is a developing country. Especially agriculture productions are most important products under the Sri Lankan export sector. Most of the Sri Lankan economic policies were built based on this sector. Also most of government policy makers and authorities try to develop this sector.

Under this sector, processing agriculture food products are acting major role. Because if we can exports some value added agricultural products than raw or primary agricultural products we can increase our income than pervious income.

According to above calculations, we can identify total intensive margins values under the HS code 07 were gradually declining from 2001 to 2012. Major importing country is a Maldives for Sri Lankan HS code 07 products. But, 2001 to 2012 the already existing bilateral trading relationship between Sri Lanka and Maldives for HS 07 product is gradually decreasing.

Area Nes, Sudan, Turkey, Islamic Republic of Iran, Thailand, South Africa, Swaziland, Bosnia and Herzegovina and Cyprus became new exporting destinations of Sri Lankan HS 07 products. Especially we built geographical diversification with these countries.

According to this research we can suggest following things for develop Sri Lankan processing foods sector. First, we want build up strong relationship between existing imports markets or countries like United Arab Emirates and Maldives. We want to find out what are the reasons for decrease this shares and we can rearrange our export policies with this kind of countries.

Also, we want to more concern about our new destinations or new markets like Area Nes, Turkey and Islamic Republic of Iran. We can create more links between these countries and we want to increase Sri Lankan imports shares among these countries.

Sri Lankan producers try to develop their technological intervention for produce this kind of processing products. So, if they can use higher technology for these products we can target develop countries likes USA, Russia and Italy as well.

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