

MARKET CONCENTRATION OF SRI LANKA'S EXPORT PRODUCT SECTORS

Concentration index is a statistical parameter which provides a measurement of the market concentration of a certain product, a product sector or of all products of a country as a whole. Ideally lower the market concentrations lower the risk for exports due to market failure. Markets should be discrete and the share of each market should be fairly equal, so that the collapse of one or a few markets will not seriously affect the product's overall exports. To analyze the said scenario and evaluate the concentration Index the following formula has been used.

$$\text{Concentration Index} = \left(\frac{\sqrt{\left(\sum_{i=1}^n \left(\frac{X_i}{X} \right)^2 \right) - \sqrt{\frac{1}{n}}}}{1 - \sqrt{\frac{1}{n}}} \right) \times 100$$

X_i = A Product sector's exports to country i (i = UK, USA, Italy...)

X = Total of a product sector's exports to all countries ($X = X_1 + \dots + X_n$)

n = Number of buyer countries

This formula takes into account the export share in each market of a particular product and calculates an index which can vary between the limits zero and hundred. The optimal situation of the index would be when the concentration index is zero, which is when the shares are exactly equal among all the markets. At the other extreme, the value goes up to 100 if the market shares are drastically different from each other with the difference between the highest share and the lowest share being considerably large.

The calculated indices for the main export product sectors of Sri Lanka are tabulated below.

Concentration Indices and Number of Destinations by Major Product Sectors 1990 - 2015

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e	Product Description	1990		1995		2000		2005		2010		2014		2015	
		No of Destinations	Concentration Index (%)	No of Destinations	Concentration Index (%)	No of Destinations	Concentration Index (%)	No of Destinations	Concentration Index (%)	No of Destinations	Concentration Index (%)	No of Destinations	Concentration Index (%)	No of Destinations	Concentration Index (%)
1	Agricultural Exports	119	12.26	138	12.48	164	13.88	164	14.87	176	13.56	173	13.08	171	13.16
1.1	Tea	79	15.23	109	16.46	130	18.13	138	20.47	143	18.76	149	18.28	147	16.59
1.2	Natural Rubber	61	15.15	63	14.89	59	16.08	55	17.97	55	25.27	49	14.74	46	16.35
1.3	Coconut	86	17.42	96	14.34	109	14.81	118	14.98	131	16.45	139	16.28	138	19.09
1.4	Other Export Crops	81	17.46	95	23.06	107	20.54	101	25.95	120	24.19	111	28.77	122	30.61
2	Fisheries products	44	52.36	57	61.18	63	57.93	77	32.84	96	23.63	84	21.35	89	28.24
3	Industrial Exports	113	38.07	138	43.53	163	50.93	186	40.19	195	29.45	193	30.96	189	33.53
3.1	Diamonds, Gems & Jewellery	44	43.38	44	43.87	52	26.76	72	46.21	47	53.87	55	29.43	45	33.97
3.2	Textiles & Garments	86	62.79	104	56.66	119	60.55	149	58.75	166	43.6	161	42.35	162	44.64
3.3	Manufactures	93	17.62	130	30.85	155	33.25	181	32.98	184	21.55	186	20.45	182	21.44
3.4	Petroleum Products	13	45.27	9	47.51	10	41.05	9	44.81	16	44.1	32	55.17	13	53.78
4	Products Unclassified	51	86.55	58	71.6	56	89.02	80	85.45	99	89.58	93	44.34	85	41.32
	Total Merchandise Exports	136	23.4	156	33.55	187	39.96	191	32.04	208	21.9	199	23.95	203	26.42

Source - Sri Lanka Export Development Board

The table reveals that all product sectors have diversified their no. of destinations over the period from 1990 to 2015. Sectors Tea, Natural Rubber, Coconut and Coconut based products, Other Export Crops, Manufactures have shown increased level concentration index indicating the said degree of diversification in destination is not that healthy. Fisheries products, Diamonds, Gems, Jewellery and Apparel sectors have recorded a decline in concentration index in 2015 compared to 1990 indicating their diversification is becoming stronger.