NEW ZEALAND

Country profile and trade aspects

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I Overview

New Zealand is an island country situated in the southwestern Pacific Ocean, consisting of two main landmasses—the North Island and the South Island and more than 700 smaller islands, covering a total area of 268,021 square kilometres. New Zealand is about 2,000 kilometres east of Australia across the Tasman Sea and 1,000 kilometres south of the islands of New Caledonia, Fiji, and Tonga. New Zealand's capital city is Wellington, and its most populous city is Auckland.

A developed country, New Zealand ranks highly in international comparisons, particularly in education, protection of civil liberties, government transparency, and economic freedom. It underwent major economic changes during the 1980s, which transformed it from a protectionist to a liberalized free-trade economy. The service sector dominates the national economy, followed by the industrial sector, and agriculture; international tourism is a significant source of revenue. Nationally, legislative authority is vested in an elected, unicameral Parliament, while executive political power is exercised by the Cabinet, led by the prime minister. New Zealand is organised into 11 regional councils and 67 territorial authorities for local government purposes. New Zealand is a member of the United Nations, Commonwealth of Nations, ANZUS, Organisation for Economic Co-operation and Development, ASEAN Plus Six, Asia-Pacific Economic Cooperation, the Pacific Community and the Pacific Islands Forum.

New Zealand ranks 14th in the human development index [1] with Life expectancy at birth (years) at 82.3, Expected years of schooling (years) at 18.8, Mean years of schooling (years) at 12.8 and Gross national income (GNI) per capita (PPP $) at 40,799 resulting in the HDI value (2019) of 0.931.

The GDP (real) growth rate of the New Zealand economy was 3.1 % in 2018 and 2.8% in 2019 with inflation rate of 0.8% in 2018. Furthermore, it is the 54th most complex economy according to the Economic Complexity Index[2]. A detailed data outlining New Zealand's country profile is shown in Table A in Appendix A.

II Economic History

By the 20th century, New Zealand had become one of the most globalized economies in the world, relying heavily on international trade with developed countries including Australia, Canada, China, European Union, the United States, Japan, and South Korea. It is a mixed economy that functions on free-market principles and has a sizable manufacturing and service sector and an efficient agricultural sector. New Zealand has the 54th largest export economy in the world measured by nominal gross domestic product. New Zealand has an extremely diverse market economy with a sizable service sector that accounted for 63% of all GDP in 2013.

New Zealand's economy is developed, but it is comparatively small in the global marketplace. In the late 19th and early 20th centuries, New Zealand's standard of living, based on the export of agricultural products, was one of the highest in the world, but after the mid-20th century the rate of growth tended to be one of the slowest among the developed countries. Impediments to economic

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1   As per the Human Development Report 2020.
2   Sourced from Harvard's Atlas of Economic Complexity

expansion have been the slow growth of the economy of the United Kingdom (which formerly was the main destination of New Zealand's exports) and its eventual membership in the European Community (later the European Union) and the high tariffs imposed by the major industrial nations against the country's agricultural products (e.g., butter and meat). New Zealand's economic history since the mid-20th century has consisted largely of attempts to grow and diversify its economy by finding new markets and new products (such as wine and paper products), expanding its manufacturing base, and entering into or supporting free-trade agreements.

New Zealand has had a long history of government intervention in the economy, ranging from state institutions competing in banking and insurance to an extensive social security system. Until the early 1980s, most administrations strengthened and supported such policies, but since then government policy has generally shifted away from intervention, although retaining the basic elements of social security. Most of the subsidies and tax incentives to agricultural and manufacturing exporters have been abolished, and such government enterprises as the Post Office have become more commercially oriented and less dependent on government subsidies. In addition, administrations have attempted to increase the flexibility of the labour market by amending labour laws and encouraging immigration.

III   The Modern Economy: Macroeconomic Indicators

As per IMFs 2021 Article IV discussions, New Zealand's sound management of the COVID-19 crisis has been was praised in suppressing infections and enabling a faster-than-expected economic recovery. Decisive and unprecedented fiscal and monetary policy responses cushioned the economic impact and supported a swift recovery of activity to above its pre-crisis level. The health policy response, with strict layered quarantine requirements, a focus on testing, contact tracing, and social distancing, and the ongoing border closure, has proven very effective. Beyond the pandemic, the IMF prescribed that the authorities should continue to strengthen structural reforms to increase the productive capacity of the economy and promote durable, inclusive, and green growth.

Making use of substantial fiscal space, direct fiscal support measures of about 19.2 percent of GDP (through fiscal year 2024/25) were put in train. These measures, among the largest internationally (as a share of GDP), have included wage subsidies, infrastructure investment, and tax measures to support business cashflow and investment. Monetary policy has been very accommodative, with the policy rate cut to 0.25 percent, the Large-Scale Asset Purchase Program, and the Funding for Lending Program. The authorities also deployed an array of other support policies, including the Small Business Cashflow and Business Finance Guarantee schemes, to support affected firms' access to finance. Labour market policies should focus on supporting displaced workers and disadvantaged groups, while promoting reallocation of resources and long-term human capital accumulation.

IV Trade Policy

In New Zealand's latest WTO Trade Policy Review of 2015, since its previous WTO Trade Policy Review (2009), New Zealand has remained among the most open economies in the world. Between 2008-09 and 2013-14, real GDP grew at an average annual rate of 2.1% driven primarily by private consumption, although in the later years of the review period growth was mainly due to gross fixed capital formation (associated with the rebuild after the 2010-2011 Canterbury earthquakes).

Over most of the review period, an accommodative monetary policy supported economic recovery after the effects of the 2008 global financial crisis. CPI inflation was within the Reserve Bank of New Zealand (RBNZ)'s target band (1%-3%) for most of the review years.

New Zealand's external trade of goods and services was equivalent to 56.7% of GDP in 2013-14, reflecting a relatively low trade intensity given the small size of the economy, which might be partly explained by the country's geographical remoteness from world markets. Primary sector-based products continue to dominate merchandise exports, increasing their share to 76%, mainly on account of high international commodity prices; while imports concentrate in manufacture (mainly capital goods) and raw materials. The direction of New Zealand's merchandise trade changed during the review period, with China becoming its largest single trading partner. Exports of services, mainly travel services, remain an important source of foreign exchange earnings.

New Zealand's trade and investment frameworks have not changed significantly since its previous Review. The Multilateral Trading System remains New Zealand's main vehicle for providing trade opportunities to its exporters and addressing the challenges it faces as a small and remote country. Nonetheless, New Zealand has increasingly engaged in regional trade agreements (RTAs) to complement its participation in the WTO. Foreign direct investment (FDI) is an important source of financing for New Zealand and a means to gain access to foreign technology, know-how and global markets. The stock of FDI in New Zealand amounted to 42% of GDP at end March 2014, with over half of it invested in the financial and manufacturing sectors.

The primary sector plays a key role in New Zealand's economy. Benefitting from high commodity prices, agricultural products contributed to 70% of total merchandise exports in 2014. Agriculture is a highly-productive sector, with minimal Government intervention. Tariffs on agricultural products continued to decline and there are no import quotas or licensing. Manufacturing remains an important contributor to the economy, but its shares in GDP, employment and exports continued to decline in the review period. Food and other resource-based industries account for most of manufacturing output. Services are the leading sector of the economy and account for 25% of total exports of goods and services. The services trade regime is relatively liberal, although there are a few restrictions on FDI in the telecommunications and transport sectors.

New Zealand has been a WTO member since 1 January 1995 and a member of GATT since 30 July 1948. The following Regional Trade Agreements (RTAs) are in force for the time being:

- ASEAN - Australia - New Zealand
- Australia - New Zealand Closer Economic Relations Trade Agreement (ANZCERTA)
- China - New Zealand
- Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)
- Hong Kong, China - New Zealand
- Korea, Republic of - New Zealand
- New Zealand - Chinese Taipei
- New Zealand - Malaysia

- New Zealand - Singapore
- Pacific Agreement on Closer Economic Relations Plus (PACER Plus)
- South Pacific Regional Trade and Economic Cooperation Agreement (SPARTECA)
- Thailand - New Zealand
- Trans-Pacific Strategic Economic Partnership

RTAs for which an early announcement has been made
- Russian Federation - New Zealand

V Trade Analysis

While presenting the overview of New Zealand's international trade data, this section will particularly focus on the bilateral trade between New Zealand and India in details.

1. New Zealand's Imports and Exports

Tables 1.1 to 1.4 show the list of New Zealand's top 20 source countries and destination countries for merchandise trade. From tables 1.1 and 1.2, it is manifest that China, Australia and USA are the top 3 countries accounting for 42% in New Zealand's imports of merchandise in 2019. India accounts for 1.23% in New Zealand's goods' imports in 2019, with an average hovering at 1.16% from 2015 to 2019.

Table 1.1:New Zealand's Imports of Merchandise in billion US dollars

Partner Country	2015	2016	2017	2018	2019	Grand Total
World	36.53	36.04	40.13	43.74	42.27	198.71
China	7.15	7.20	7.75	8.64	8.54	39.28
Australia	4.33	4.53	4.91	5.02	4.87	23.67
USA	4.31	4.08	4.29	4.42	4.23	21.33
Japan	2.39	2.56	2.96	3.04	2.76	13.70
Germany	1.71	1.75	2.14	2.21	2.38	10.19
Thailand	1.51	1.62	1.89	1.92	1.76	8.71
Rep. of Korea	1.35	1.53	1.42	2.00	1.62	7.92
Singapore	1.26	1.00	1.37	1.48	1.22	6.33
United Arab Emirates	0.32	0.77	1.42	1.99	1.76	6.26
Malaysia	1.22	0.94	1.26	1.45	1.34	6.19
United Kingdom	0.94	1.02	1.23	1.25	1.18	5.62
France	0.96	0.81	0.71	0.80	0.79	4.08
Italy	0.69	0.74	0.83	0.90	0.90	4.06
Indonesia	0.63	0.47	0.61	0.64	0.68	3.03
Other Asia, nes	0.54	0.52	0.58	0.62	0.58	2.85
Viet Nam	0.42	0.46	0.59	0.64	0.70	2.81
Canada	0.45	0.46	0.46	0.49	0.50	2.35

	0.42	0.41	0.44	0.51	0.52	2.30
India						
Others	5.92	5.17	5.28	5.72	5.95	28.03
Total	**73.06**	**72.09**	**80.26**	**87.47**	**84.54**	**397.42**

Source: UN Comtrade database

Table 1.2: Shares (%) of countries in New Zealand's Imports of Merchandise

Partner Country	**2015**	**2016**	**2017**	**2018**	**2019**	**Share (%)**
China	19.56	19.98	19.31	19.76	20.21	19.77
Australia	11.85	12.58	12.24	11.48	11.53	11.91
USA	11.80	11.32	10.68	10.12	10.00	10.73
Japan	6.54	7.09	7.38	6.94	6.53	6.90
Germany	4.68	4.85	5.34	5.05	5.63	5.13
Thailand	4.14	4.50	4.71	4.39	4.16	4.38
Rep. of Korea	3.68	4.25	3.54	4.58	3.83	3.99
Singapore	3.46	2.77	3.42	3.38	2.88	3.18
United Arab Emirates	0.87	2.14	3.54	4.54	4.16	3.15
Malaysia	3.33	2.60	3.13	3.31	3.16	3.12
United Kingdom	2.58	2.82	3.08	2.86	2.79	2.83
France	2.64	2.24	1.76	1.83	1.88	2.05
Italy	1.88	2.06	2.06	2.07	2.13	2.04
Indonesia	1.74	1.30	1.51	1.47	1.60	1.53
Other Asia, nes	1.49	1.45	1.45	1.41	1.38	1.43
Viet Nam	1.16	1.26	1.47	1.46	1.65	1.41
Canada	1.23	1.29	1.14	1.11	1.17	1.18
India	1.15	1.15	1.09	1.17	1.23	1.16
Others	16.21	14.33	13.15	13.07	14.08	14.11
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: UN Comtrade database

Table 1.3: New Zealand's Exports of Merchandise in billion US dollars

Partner Country	**2015**	**2016**	**2017**	**2018**	**2019**	**Grand Total**
World	34.36	33.73	38.05	39.84	39.54	185.52
China	6.04	6.56	8.48	9.65	11.04	41.78
Australia	5.85	5.76	6.25	6.34	5.74	29.94
USA	4.04	3.69	3.78	3.83	3.72	19.05
Japan	2.07	2.07	2.28	2.42	2.31	11.15
Rep. of Korea	1.10	1.04	1.06	1.21	1.11	5.52
United Kingdom	1.17	1.02	1.03	1.07	0.98	5.27
Singapore	0.76	0.78	0.81	0.88	0.74	3.97
Other Asia, nes	0.78	0.76	0.80	0.83	0.77	3.95

China, Hong Kong SAR	0.53	0.55	0.88	0.79	0.84	3.59
Malaysia	0.66	0.55	0.72	0.71	0.70	3.35
Indonesia	0.57	0.60	0.68	0.68	0.70	3.23
Thailand	0.54	0.57	0.63	0.64	0.66	3.04
Netherlands	0.57	0.56	0.62	0.59	0.50	2.85
United Arab Emirates	0.58	0.43	0.62	0.57	0.53	2.74
Germany	0.48	0.47	0.51	0.60	0.56	2.61
Philippines	0.45	0.44	0.50	0.53	0.58	2.50
Canada	0.47	0.42	0.48	0.50	0.48	2.35
India	0.45	0.44	0.48	0.49	0.46	2.33
Others	7.25	7.00	7.44	7.49	7.11	36.29
Total	**68.71**	**67.46**	**76.10**	**79.68**	**79.08**	**371.04**

Source: UN Comtrade database

Table 1.4: Shares (%) of countries in New Zealand's Exports of Merchandise

Partner Country	**2015**	**2016**	**2017**	**2018**	**2019**	**Share (%)**
China	17.58	19.46	22.29	24.23	27.92	22.52
Australia	17.03	17.07	16.43	15.92	14.52	16.14
USA	11.76	10.93	9.94	9.60	9.40	10.27
Japan	6.03	6.14	5.98	6.08	5.84	6.01
Rep. of Korea	3.20	3.08	2.79	3.04	2.81	2.97
United Kingdom	3.41	3.02	2.70	2.69	2.48	2.84
Singapore	2.21	2.32	2.13	2.21	1.88	2.14
Other Asia, nes	2.27	2.24	2.11	2.10	1.96	2.13
China, Hong Kong SAR	1.54	1.64	2.30	1.98	2.12	1.93
Malaysia	1.93	1.64	1.90	1.79	1.78	1.81
Indonesia	1.65	1.79	1.80	1.71	1.76	1.74
Thailand	1.58	1.70	1.64	1.61	1.66	1.64
Netherlands	1.65	1.67	1.63	1.49	1.27	1.53
United Arab Emirates	1.70	1.28	1.63	1.43	1.35	1.48
Germany	1.39	1.40	1.33	1.50	1.42	1.41
Philippines	1.31	1.31	1.31	1.34	1.47	1.35
Canada	1.37	1.23	1.26	1.26	1.22	1.27
India	1.30	1.32	1.27	1.24	1.17	1.26
Others	21.09	20.76	19.56	18.80	17.98	19.56
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: UN Comtrade database

From tables 1.3 and 1.4, it is seen that China, Australia and USA are the top 3 export destinations of New Zealand. With India, the export share is around 1.26% from 2015 to 2019.

Using the ITC HS commodity codes, tables 1.5 and 1.6 highlight the top 10 commodities, at the double digit aggregation, that comprises New Zealand's imports and exports respectively.

Table 1.5: Shares (%) of top 10 Commodities in New Zealand's Imports of Merchandise

ITC-HS Chapter	Commodity Description	2015	2016	2017	2018	2019
HS-87	Vehicles; other than railway or tramway rolling stock, and parts and accessories thereof	13.39	14.87	15.79	14.33	13.34
HS-84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	13.27	13.26	14.44	13.82	14.49
HS-27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	9.97	8.51	9.43	12.13	11.05
HS-85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles	8.33	8.30	8.29	8.07	8.40
HS-39	Plastics and articles thereof	3.92	3.85	3.85	3.68	3.64
HS-90	Optical, photographic, cinematographic, measuring, checking, medical or surgical instruments and apparatus; parts and accessories	3.08	3.20	3.00	2.83	3.15
HS-88	Aircraft, spacecraft and parts thereof	3.71	3.02	1.81	1.99	2.01
HS-30	Pharmaceutical products	2.38	2.56	2.35	2.31	2.28
HS-94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, n.e.c.; illuminated signs, illuminated name-plates and the like; prefabricated buildings	2.03	2.19	2.05	2.00	2.07
HS-73	Iron or steel articles	1.84	1.88	1.94	1.93	2.03
	Others	38.08	38.36	37.05	36.92	37.54
	Total	**100**	**100**	**100**	**100**	**100**

Source: UN Comtrade database

Table 1.6: Shares (%) of top 10 Commodities in New Zealand's Exports of Merchandise

ITC-HS Chapter	Commodity Description	2015	2016	2017	2018	2019
HS-04	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included	24.15	23.73	26.81	25.57	26.95
HS-02	Meat and edible meat offal	13.94	12.20	12.34	12.92	13.43
HS-44	Wood and articles of wood; wood charcoal	7.18	8.51	8.67	9.11	8.38
HS-08	Fruit and nuts, edible; peel of citrus fruit or melons	4.71	5.64	4.97	5.62	5.69
HS-22	Beverages, spirits and vinegar	3.61	3.81	3.67	3.53	3.63

HS-84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	3.47	3.34	3.06	3.20	3.11
HS-99	Commodities not specified according to kind	2.41	3.22	3.34	3.39	3.07
HS-03	Fish and crustaceans, molluscs and other aquatic invertebrates	2.96	3.34	3.00	2.85	3.07
HS-19	Preparations of cereals, flour, starch or milk; pastrycooks' products	1.77	2.51	2.81	3.24	3.82
HS-35	Albuminoidal substances; modified starches; glues; enzymes	3.03	2.50	2.33	1.94	2.06
	Others	32.77	31.22	29.00	28.63	26.77
	Total	**100**	**100**	**100**	**100**	**100**

Source: UN Comtrade database

The top 5 highest imported products constitute 'Vehicles; other than railway or tramway rolling stock, and parts and accessories thereof" (HS-87),'Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof' (HS-84), Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes' (HS-27) , 'Electrical machinery and equipment and parts thereof' (HS-85) and ' Plastics and articles thereof'(HS-39). On the other hand, the dominant export basket constitutes all primary or less processed products (mostly food and edible products) such as 'Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included' (HS-04), 'Meat and edible meat offal' (HS-02), 'Wood and articles of wood; wood charcoal (HS- 44) , 'Fruit and nuts, edible; peel of citrus fruit or melons' (HS-08) and 'Beverages, spirits and vinegar' (HS-22).

2. Export Trade Intensity Index

Export Trade Intensity Index (ETII) of a country (here, India) with respect to an importing country (here, New Zealand) is the share of the exporting country's merchandise going to that particular importing country divided by the share of world exports going to that importing country. In other words, it is the importance of that importing country as a destination for the exporting country's merchandise outflow, as compared to the importance that importing country enjoys as a destination of world exports. But algebraically, it is equal to the exporting country's share in the importer's market as compared to the importing country's market share in the world market.[2] Table 2.1, which states the ETII of BRICS countries and USA with respect to New Zealand, shows that apart from China and USA (>1), no other country(ies), in general, have consistently high trade intensity indices. Thus India, Brazil and South Africa, with index values less than 1, do not view New Zealand as a relatively important destination for exports. Therefore, New Zealand's import market may very well be driven by strong trade ties with China and USA, among others.

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2   See Appendix D for the formula of Export Intensity Index.

Countries	2015	2016	2017	2018	2019
India	0.60	0.61	0.54	0.57	0.59
Brazil	0.17	0.27	0.19	0.16	0.13
China	1.09	1.16	1.09	1.13	1.14
South Africa	0.53	0.58	0.53	0.49	0.49
USA	1.13	1.19	1.17	1.13	1.11

Source: UN Comtrade database

Elaborating on the ETII, table 2.2 shows the disaggregated value of this index for India with respect to New Zealand. The index is calculated for each of the 2-digit ITC HS commodity codes and a higher value, greater than 1, represents that the Indian exports, of those specific chapters, to New Zealand are relatively performing better than the world averages.

Table 2.2: ITC-HS Chapter-wise Export Intensity Indices for India w.r.t New Zealand in 2019

ITC-HS Chapter	Trade Intensity Index (TII)	ITC-HS Chapter	Trade Intensity Index (TII)	ITC-HS Chapter	Trade Intensity Index (TII)	ITC-HS Chapter	Trade Intensity Index (TII)
26	11.88	21	1.10	48	0.61	23	0.07
79	8.17	50	1.09	39	0.61	17	0.07
51	5.89	64	1.07	46	0.58	91	0.07
56	4.41	40	1.06	67	0.58	45	0.06
43	4.16	58	1.06	25	0.56	27	0.04
41	3.62	60	0.97	55	0.55	47	0.02
11	3.56	29	0.96	68	0.55	93	0.01
81	3.50	38	0.95	28	0.54	99	0.01
53	3.49	15	0.92	34	0.53	88	0.00
95	3.44	22	0.84	49	0.52	89	0.00
20	3.38	62	0.84	76	0.52	01	0.00
12	2.23	83	0.82	13	0.49	02	0.00
59	2.08	72	0.81	31	0.48	03	0.00
54	2.01	61	0.76	14	0.45	04	0.00
44	1.94	57	0.72	87	0.41	05	0.00
19	1.90	16	0.71	75	0.36	06	0.00
24	1.89	82	0.71	52	0.35	07	0.00
63	1.67	33	0.71	84	0.30	08	0.00
30	1.67	96	0.70	90	0.27	09	0.00
97	1.66	73	0.66	69	0.26	36	0.00
42	1.61	85	0.64	35	0.18	78	0.00
74	1.42	70	0.64	86	0.12	80	0.00
94	1.42	32	0.62	66	0.10		

65	1.22	92	0.62	18	0.10
71	1.11	10	0.61	37	0.08

Source: Computed from UN Comtrade Database

In Table 2.2, the chapters are arranged in order of magnitude from largest to smallest values of ETII. From the above table, it is clear that there are several chapters which have an index value greater than 1 which are as under, which are mostly primary, agricultural or textiles related products :

HS-11 Products of the milling industry; malt, starches, inulin, wheat gluten

HS-12 Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit, industrial or medicinal plants; straw and fodder

HS-19 Preparations of cereals, flour, starch or milk; pastrycooks' products

HS-20 Preparations of vegetables, fruit, nuts or other parts of plants

HS-21 Miscellaneous edible preparations

HS-24 Tobacco and manufactured tobacco substitutes

HS-26 Ores, slag and ash

HS-30 Pharmaceutical products

HS-40 Rubber and articles thereof

HS-41 Raw hides and skins (other than furskins) and leather

HS-42 Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silk-worm gut)

HS-43 Furskins and artificial fur; manufactures thereof

HS-44 Wood and articles of wood; wood charcoal

HS-50 Silk

HS-51 Wool, fine or coarse animal hair; horsehair yarn and woven fabric

HS-53 Vegetable textile fibres; paper yarn and woven fabrics of paper yarn

HS-54 Man-made filaments; strip and the like of man-made textile materials

HS-56 Wadding, felt and nonwovens, special yarns; twine, cordage, ropes and cables and articles thereof

HS-58 Fabrics; special woven fabrics, tufted textile fabrics, lace, tapestries, trimmings, embroidery

HS-59 Textile fabrics; impregnated, coated, covered or laminated; textile articles of a kind suitable for industrial use

HS-63 Textiles, made up articles; sets; worn clothing and worn textile articles; rags

HS-64 Footwear; gaiters and the like; parts of such articles

HS-74 Copper and articles thereof

HS-79 Zinc and articles thereof

HS-81 Metals; n.e.c., cermets and articles thereof

HS-95 Toys, games and sports requisites; parts and accessories thereof

HS-97 Works of art; collectors' pieces and antiques

3. Trade Complementarity Index

The ITC-HS chapters identified in the previous section is only a short-list, for it narrates half the story. Trade takes place when there is a complementarity of demand and supply, in the present case, between

the demand of New Zealand and the supply of India. The Trade Complementarity Index (TCI) is a measure of this match, and the value of the index between Indian exports and New Zealand's imports in 2019 stood at 0.34, which is not very high, given that the index between Indian exports and world imports was 0.39. Hence, the Relative Trade Complementarity Index is 0.86 (i.e. < 1), meaning that India's exports have less complementarity with New Zealand's imports than with world imports.[3]

TCI is computed by taking the shares of each commodity (here, at the ITC-HS 6-digit level) in the export basket of India, and then the corresponding shares of these commodities in the import basket of New Zealand, calculating the absolute value of the difference between the two for each 6-digit level commodity, summing the differences up, dividing the sum by 2, and subtracting what we get from 1. So, the differences in the shares are the major determinants.

Table 3.1: Trade Complementarity Index (including Relative) between India and New Zealand

	2015	2016	2017	2018	2019
TCI Between India and New Zealand[4]	0.32	0.32	0.31	0.33	0.34
TCI Between India[5] and World	0.41	0.38	0.40	0.41	0.39
RTCPI[6]	0.77	0.83	0.78	0.79	0.86

Table 3.2: Trade Complementarity Index (including Relative) between selected countries (largest exporters to New Zealand) and New Zealand in 2019

Countries	TCI	TCIW	RTCI
China	0.44	0.51	0.87
Australia	0.16	0.20	0.77
USA	0.51	0.67	0.76
Japan	0.35	0.47	0.74
Germany	0.53	0.61	0.87

Source: Computed from UN Comtrade Database

When we compare the Relative Trade Complementarity Index (RTCI) between India and New Zealand to that of other exporting countries and New Zealand in table 3.2, we see that India's RCTI w.r.t New Zealand is comparable to China (0.87) and Germany (0.87) and higher than Australia, USA and Japan. However, even if the value of the index may not be high, it is a composite value depending on all the differences between 6-digit values, as mentioned before, taken together. The differences at the individual product group level may be examined. The differences at the individual ITC-HS 2-digit level are examined to find out at which products the complementarities lie and there is a greater match between demand (imports) and supply (exports).

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3   See RTCI in Appendix D.
4   Trade Complementarity Index between India and New Zealand.
5   Trade Complementarity Index between India and World.
6   Relative Trade Complementarity Index between India and New Zealand.

The ITC-HS 2-digit code-wise composition of Indian exports and New Zealand's imports is given in table 3.3 below.

Table 3.3: Composition of India's Exports and New Zealand's Imports in 2019 (ITC-HS chapter-wise)

ITC-HS Chapter	India		New Zealand	
	Exports(Bn $)	Share of Chapters (%)	Imports(Bn $)	Share of Chapters (%)
HS-01	0.02	0.01	0.05	0.12
HS-02	3.45	1.07	0.20	0.48
HS-03	6.30	1.95	0.11	0.26
HS-04	0.45	0.14	0.24	0.58
HS-05	0.10	0.03	0.05	0.12
HS-06	0.08	0.02	0.01	0.03
HS-07	1.09	0.34	0.08	0.18
HS-08	1.49	0.46	0.32	0.75
HS-09	3.30	1.02	0.12	0.28
HS-10	7.07	2.19	0.25	0.59
HS-11	0.31	0.10	0.06	0.13
HS-12	1.70	0.53	0.10	0.23
HS-13	0.94	0.29	0.03	0.06
HS-14	0.05	0.02	0.00	0.00
HS-15	1.17	0.36	0.26	0.61
HS-16	0.47	0.14	0.12	0.28
HS-17	1.97	0.61	0.31	0.74
HS-18	0.19	0.06	0.20	0.47
HS-19	0.54	0.17	0.35	0.84
HS-20	0.61	0.19	0.23	0.54
HS-21	0.83	0.26	0.65	1.53
HS-22	0.28	0.09	0.46	1.09
HS-23	1.45	0.45	0.69	1.64
HS-24	0.96	0.30	0.17	0.40
HS-25	2.01	0.62	0.16	0.38
HS-26	3.03	0.94	0.00	0.00
HS-27	44.53	13.78	4.67	11.05
HS-28	1.82	0.56	0.40	0.96
HS-29	18.25	5.64	0.32	0.76
HS-30	16.26	5.03	0.96	2.28
HS-31	0.13	0.04	0.50	1.19
HS-32	3.50	1.08	0.26	0.61
HS-33	2.36	0.73	0.47	1.11
HS-34	0.64	0.20	0.24	0.57
HS-35	0.23	0.07	0.14	0.32
HS-36	0.12	0.04	0.01	0.03

HS-37	0.01	0.00	0.03	0.07
HS-38	5.14	1.59	0.42	0.99
HS-39	7.35	2.27	1.54	3.64
HS-40	3.23	1.00	0.47	1.11
HS-41	0.55	0.17	0.00	0.01
HS-42	2.51	0.78	0.23	0.54
HS-43	0.01	0.00	0.01	0.02
HS-44	0.48	0.15	0.28	0.66
HS-45	0.00	0.00	0.00	0.01
HS-46	0.05	0.01	0.01	0.01
HS-47	0.01	0.00	0.03	0.08
HS-48	2.06	0.64	0.74	1.74
HS-49	0.37	0.11	0.17	0.41
HS-50	0.08	0.03	0.00	0.01
HS-51	0.18	0.06	0.01	0.04
HS-52	6.00	1.86	0.02	0.04
HS-53	0.45	0.14	0.01	0.03
HS-54	2.34	0.72	0.08	0.19
HS-55	1.75	0.54	0.06	0.14
HS-56	0.42	0.13	0.07	0.17
HS-57	1.71	0.53	0.11	0.26
HS-58	0.41	0.13	0.01	0.02
HS-59	0.28	0.09	0.04	0.09
HS-60	0.44	0.14	0.02	0.05
HS-61	7.88	2.44	0.58	1.36
HS-62	8.36	2.59	0.58	1.38
HS-63	5.16	1.60	0.27	0.64
HS-64	2.81	0.87	0.30	0.71
HS-65	0.06	0.02	0.04	0.10
HS-66	0.00	0.00	0.01	0.03
HS-67	0.27	0.08	0.01	0.02
HS-68	1.70	0.53	0.16	0.37
HS-69	1.82	0.56	0.15	0.36
HS-70	0.91	0.28	0.27	0.64
HS-71	36.73	11.36	0.29	0.69
HS-72	9.77	3.02	0.34	0.79
HS-73	7.25	2.24	0.86	2.03
HS-74	0.90	0.28	0.12	0.29
HS-75	0.09	0.03	0.00	0.01
HS-76	5.24	1.62	0.26	0.63
HS-78	0.40	0.12	0.00	0.00
HS-79	0.56	0.17	0.04	0.09
HS-80	0.01	0.00	0.02	0.05
HS-81	0.05	0.02	0.01	0.02

HS-82	0.89	0.28	0.18	0.43
HS-83	0.67	0.21	0.20	0.48
HS-84	21.26	6.58	6.13	14.49
HS-85	14.94	4.62	3.55	8.40
HS-86	0.35	0.11	0.09	0.21
HS-87	17.41	5.39	5.64	13.34
HS-88	1.49	0.46	0.85	2.01
HS-89	5.80	1.79	0.25	0.58
HS-90	3.39	1.05	1.33	3.15
HS-91	0.10	0.03	0.07	0.16
HS-92	0.03	0.01	0.03	0.06
HS-93	0.13	0.04	0.07	0.17
HS-94	1.84	0.57	0.87	2.07
HS-95	0.42	0.13	0.43	1.02
HS-96	0.63	0.19	0.17	0.41
HS-97	0.13	0.04	0.05	0.12
HS-99	0.21	0.07	0.47	1.11
Total	**323.25**	**100**	**42.27**	**100**

Source: Computed from UN Comtrade Database

Complementarity in respect of a particular commodity group (here, ITC-HS two-digit level code) implies that India's exports of the commodity (to the world) is substantial, and so is New Zealand's imports of the commodity (from the world). As it is required to identify the sectors (ITC-HS 2-digit chapters) which have contributed most to the low level of complementarity, the absolute difference in shares – between the share in Indian exports and the share in New Zealand's imports – for each 2-digit code may be computed. Table 3.4 below shows the twenty 2-digit codes which have seen the highest differences. This will be of interest to framers of policy if there is a need to align India's exports to New Zealand's imports.

Table 3.4: Top Twenty Chapters with highest absolute difference in shares in % (in Indian exports and New Zealand imports in 2019)

ITC-HS Chapter	Commodity Description	Absolute Value of Difference in Shares(%)	Higher Share in
HS-71	Natural, cultured pearls; precious, semi-precious stones; precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin	10.68	Indian Exports
HS-87	Vehicles; other than railway or tramway rolling stock, and parts and accessories thereof	7.96	New Zealand Imports
HS-84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	7.92	New Zealand Imports

HS-29	Organic chemicals	4.88	Indian Exports
HS-85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles	3.78	New Zealand Imports
HS-30	Pharmaceutical products	2.75	Indian Exports
HS-27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	2.73	Indian Exports
HS-72	Iron and steel	2.23	Indian Exports
HS-90	Optical, photographic, cinematographic, measuring, checking, medical or surgical instruments and apparatus; parts and accessories	2.10	New Zealand Imports
HS-52	Cotton	1.82	Indian Exports
HS-03	Fish and crustaceans, molluscs and other aquatic invertebrates	1.69	Indian Exports
HS-10	Cereals	1.60	Indian Exports
HS-88	Aircraft, spacecraft and parts thereof	1.55	New Zealand Imports
HS-94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, n.e.c.; illuminated signs, illuminated name-plates and the like; prefabricated buildings	1.50	New Zealand Imports
HS-39	Plastics and articles thereof	1.36	New Zealand Imports
HS-21	Miscellaneous edible preparations	1.27	New Zealand Imports
HS-89	Ships, boats and floating structures	1.21	Indian Exports
HS-62	Apparel and clothing accessories; not knitted or crocheted	1.21	Indian Exports
HS-23	Food industries, residues and wastes thereof; prepared animal fodder	1.19	New Zealand Imports
HS-31	Fertilizers	1.15	New Zealand Imports

Source: Computed from UN Comtrade Database

It is evident from table 3.4 that in case of several high-technology manufactures like chapters 85 ('Electrical, electronic equipment'), 84 ('Nuclear reactors, boilers, machinery, etc,'),88 (Aircraft, spacecraft and parts thereof), 90 ('Optical, photo, technical, medical, etc apparatus'), 87(Vehicles; other than railway or tramway rolling stock, and parts and accessories thereof), the shares in New Zealand's imports outweigh those in Indian exports. The commodity groups in case of which shares in Indian exports outstrip those in New Zealand's imports include items involving Mineral fuels, mineral oils (chapter 27), Natural, cultured pearls; precious, semi-precious stones; precious metals etc. (chapter 71), organic chemicals (chapter 29), Iron and Steel (chapter 72), cotton (chapter 52), cereals (chapter 10), fish and crustaceans etc. (chapter 03), apparel items (chapter 62) etc.

4. RCA and RCII

This approach involves the use of information regarding sectors which have a relative importance, in terms of value, in India's exports (relative to the importance in world exports), and which enjoy a similar relative importance in New Zealand's imports. The first is known as Revealed Comparative Advantage (RCA) and the second Revealed Comparative Import Inclination (RCII). RCA index for a commodity (or commodity group) exported from India is higher than 1 if its importance is more in India's exports than in world exports, and vice versa. Similarly, RCII index for New Zealand's imports for a commodity (or commodity group) is higher than 1 if its importance is more in New Zealand's imports than in world imports, and vice versa.

Hence, those sectors – we analyse at the ITC-HS two-digit code level – which have both RCA for India and RCII for New Zealand higher than 1 are the sectors which India's exports and New Zealand's imports to an extent more than overall world trends warrant. Hence these are the sectors which are expected to see substantial Indian exports to New Zealand. Tables 4.1 and 4.2 shows values of RCA for Indian exports and of RCII for New Zealand's imports for 2019. Those chapters for which the values are above 1 are in red.

Table 4.1: RCA of Indian exports in 2019 – ITC-HS chapter-wise

ITC-HS Chapter	RCA	ITC-HS Chapter	RCA	ITC-HS Chapter	RCA	ITC-HS Chapter	RCA
13	6.88	42	1.67	70	0.69	95	0.20
57	6.47	72	1.62	96	0.68	97	0.17
52	6.45	36	1.54	87	0.67	81	0.16
53	6.12	30	1.52	59	0.63	80	0.14
63	4.59	67	1.50	21	0.61	31	0.13
10	4.12	38	1.43	34	0.60	22	0.13
78	3.33	73	1.37	49	0.57	91	0.10
71	3.17	27	1.31	20	0.56	45	0.10
14	3.02	24	1.26	84	0.55	43	0.08
17	2.96	23	1.15	16	0.54	66	0.05
89	2.91	64	1.12	86	0.53	37	0.04
55	2.83	12	1.08	83	0.53	99	0.03
25	2.76	46	1.03	35	0.44	47	0.01
54	2.63	40	1.01	93	0.43	01	
29	2.63	11	0.93	94	0.41	02	
32	2.50	28	0.92	19	0.40	03	
50	2.46	56	0.92	74	0.38	04	
62	2.30	33	0.89	65	0.33	05	
61	2.14	51	0.84	90	0.31	06	
58	1.91	15	0.83	85	0.31	07	
79	1.85	26	0.81	88	0.24	08	
68	1.84	82	0.77	18	0.22	09	

76	1.79	60	0.71	75	0.22		
69	1.77	48	0.71	44	0.21		
41	1.70	39	0.69	92	0.21		

Source: Computed from UN Comtrade Database

Table 4.2: RCII of New Zealand's imports in 2019 – ITC-HS chapter-wise

ITC-HS Chapter	RCII	ITC-HS Chapter	RCII	ITC-HS Chapter	RCII	ITC-HS Chapter	RCII
23	3.93	70	1.54	10	1.09	72	0.39
17	3.76	92	1.46	39	1.08	60	0.38
21	3.71	69	1.46	90	0.95	74	0.35
57	3.48	33	1.43	79	0.93	14	0.35
31	3.32	68	1.42	64	0.91	29	0.32
93	2.44	32	1.41	27	0.88	47	0.29
19	2.10	25	1.40	44	0.88	71	0.20
63	2.01	13	1.40	38	0.87	52	0.19
48	1.98	11	1.40	43	0.87	81	0.15
49	1.95	28	1.39	54	0.86	41	0.08
35	1.93	53	1.35	37	0.80	78	0.08
65	1.89	15	1.34	97	0.79	75	0.06
80	1.80	46	1.31	55	0.77	26	0.00
24	1.80	86	1.30	59	0.76	01	
18	1.79	56	1.28	45	0.75	02	
89	1.77	73	1.27	99	0.72	03	
34	1.76	82	1.26	67	0.69	04	
66	1.71	42	1.21	76	0.66	05	
20	1.66	62	1.21	30	0.65	06	
22	1.66	36	1.20	50	0.62	07	
87	1.65	84	1.19	91	0.59	08	
94	1.61	83	1.19	51	0.55	09	
96	1.58	61	1.18	85	0.54		
95	1.58	16	1.12	58	0.48		
88	1.55	40	1.09	12	0.42		

Source: Computed from UN Comtrade Database

Policymakers' focus should be to zero in on commodity groups for which RCA of Indian exports >1 and RCII of New Zealand's imports >1 as these commodity groups have good potential for bilateral trade between India and New Zealand with India having a relatively superlative standing in production/supply of these commodities, which then have a larger than average import demand in New Zealand. These commodities should be the intersection set of ITC-HS chapters with RCA >1 in Table 4.1 and ITC-HS chapters with RCII >1 in Table 4.2.

Table 4.3: RCA of Indian exports to New Zealand in 2019 – ITC-HS chapter-wise

ITC-HS Chapter	RCA Between Countries	ITC-HS Chapter	RCA Between Countries	ITC-HS Chapter	RCA Between Countries	ITC-HS Chapter	RCA Between Countries
79	9.57	15	1.84	97	0.95	45	0.07
20	8.72	96	1.71	10	0.92	91	0.07
56	8.58	33	1.61	81	0.88	26	0.06
95	8.57	70	1.58	72	0.81	75	0.05
11	6.62	92	1.56	76	0.70	93	0.04
21	5.96	12	1.56	58	0.66	27	0.04
19	5.67	62	1.54	84	0.66	99	0.03
53	5.47	16	1.52	85	0.60	88	0.01
63	4.93	82	1.51	67	0.59	47	0.01
51	4.77	28	1.48	29	0.57	89	0.00
57	3.90	38	1.45	35	0.57	36	0.00
43	3.77	34	1.43	69	0.55	78	0.00
94	3.46	73	1.36	23	0.46	80	0.00
65	3.04	64	1.36	60	0.45		
42	2.99	61	1.35	90	0.44		
44	2.88	24	1.34	55	0.43		
59	2.80	46	1.33	41	0.41		
54	2.62	68	1.29	71	0.39		
31	2.51	50	1.24	14	0.38		
22	2.12	32	1.20	17	0.38		
30	1.98	13	1.20	18	0.31		
48	1.93	87	1.16	66	0.25		
83	1.89	39	1.12	86	0.22		
40	1.85	25	1.08	52	0.08		
49	1.84	74	1.07	37	0.07		

Source: Computed from UN Comtrade Database

It can be established that if, for a particular commodity, RCA for India and RCII for New Zealand are both > 1, it can be expected that RCII for that commodity in New Zealand's imports from India will be > 1. If this is not the case, the reasons thereof need to be investigated, and appropriate policy measures taken. Actually it implies that the importers of New Zealand are not importing the particular commodity in sufficient amount (in value terms) while importing from India. It is not necessarily that they are averse to buying from India in general, they may very well purchase other commodities from India, but – for some reason – not this particular product. Policies designed to make these products from India attractive to New Zealand's importers need to be adopted.

Table 4.4: RCII of New Zealand's imports from India in 2019 – ITC-HS chapter-wise

ITC-HS Chapter	RCII Between Countries	ITC-HS Chapter	RCII Between Countries	ITC-HS Chapter	RCII Between Countries	ITC-HS Chapter	RCII Between Countries
19	7.35	34	1.77	99	0.87	52	0.21
56	7.24	59	1.76	38	0.81	35	0.19
95	7.16	30	1.73	74	0.81	89	0.10
79	6.89	82	1.64	85	0.79	93	0.09
22	6.66	33	1.60	45	0.76	26	0.09
20	6.53	62	1.42	14	0.73	37	0.09
11	6.30	13	1.37	46	0.70	75	0.07
53	6.17	49	1.37	69	0.62	27	0.05
21	4.47	32	1.33	25	0.60	97	0.04
51	3.80	10	1.33	71	0.56	81	0.02
65	3.73	28	1.31	72	0.56	88	0.01
63	3.65	15	1.29	91	0.53	01	
54	2.93	16	1.28	43	0.53	02	
57	2.85	68	1.27	76	0.53	03	
17	2.72	24	1.23	31	0.51	04	
42	2.64	64	1.20	18	0.51	05	
94	2.35	61	1.19	86	0.49	06	
44	2.27	12	1.19	67	0.46	07	
58	2.19	70	1.19	36	0.40	08	
92	2.08	39	1.18	29	0.40	09	
50	2.00	73	1.13	23	0.35	47	
40	1.84	87	1.03	41	0.31	78	
48	1.82	60	0.98	66	0.31		
96	1.82	84	0.95	90	0.29		
83	1.79	55	0.88	80	0.23		

Source: Computed from UN Comtrade Database

Delving deeper in tables 4.3 and 4.4, those ITC-HS chapters that have both RCA of Indian exports to New Zealand in 2019 and RCII of New Zealand's imports from India in 2019 greater than 1 should draw the focus of policymakers. This was a sector-wise analysis, and the policies to be adopted need to address the sector at large. There may be, in a particular chapter, 6-digit commodities which may satisfy the conditions satisfied by the chapter as a whole, and there may many which do not. There may even be occasions wherein no 6-digit commodity of a particular chapter individually satisfies the conditions but the chapter as a whole does. This may be because RCA and RCII of some commodities in India's exports to New Zealand < 1 (which brings down the RCA and RCII of the chapter as a whole), but their RCAs in case of India's exports (to the whole world) or their RCIIs in

case of New Zealand's imports (from the whole world) may also be < 1. In case of other commodities of the same chapter, both may be > 1. On the other hand, a chapter as a whole may not satisfy the conditions, but some 6-digit commodities included in it may.

So, ITC-HS 6-digit code-wise analysis is more relevant, because the greater granularity permits better focusing of policy measures. The list of chapters may not be consistent with the list of ITC-HS six-digit commodities, because of the reasons mentioned above. The analytical framework elaborated above, with chapters as the basis, was mainly for the purpose of elucidation of the methodology adopted, but also for giving a sector-wise status. But for policy formulation, the analysis with the highest possible granularity is the best option. Hence, it will be most expeditious to consider the ITC-HS six-digit commodities which emerge, as the candidates for the policies mentioned above, when the methodology set out above is employed at the 6-digit level. This list is given in Appendix B.

So much for product-specific policies. Market (i.e. destination) specific policies need to be taken, too. If India has a market share in the world, for commodity P (say s), which is greater than India's overall market share (for all commodities) in the world (say t), there is no reason to expect that India's market share for P in New Zealand, say g < s. g can be < s only when, for some reason, New Zealand imports P, but not sufficiently from India. In such cases, market or destination-specific promotional policies will be needed. The same will be true when New Zealand share in India's export of P falls below New Zealand's share in total world imports of P. When both coincide, there is an even stronger case for adoption of the market-specific promotional policies. Appendix C shows the list of such commodities in case of India's exports to New Zealand.

For commodities appearing in both the lists – in Appendix B and Appendix C, both product-oriented and market-oriented promotional policies are required to be adopted.

5. Export Concentration

The standard measure of concentration of exports over a range of commodities is the Hirschman-Herfindahl Index (HHI), which is the sum of the squares of the shares of the commodities (in terms of value) in the export basket.[7] The index has been calculated over all ITC-HS six-digit commodities, the highest level of granularity allowed by comparable international data. The index is more meaningful the more granular the data.

In case of India's exports to New Zealand, table 5.1 shows that the value of the index, between 2015 and 2019, averages around 0.13. It may be noted that the index for India's exports to the world at 0.14 (average) is higher than it is for India's exports to New Zealand. A relatively lower level of concentration of exports means that India's export basket to New Zealand is more diverse than to the world and a less concentrated export basket indicates a broader production base with lesser concentration (industry specific) risks.

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7   See Export Concentration Index in Appendix D.

Table 5.1: Hirschman-Herfindahl Index for India to the World and for India to New Zealand

Year	India-New Zealand HHI	India-World HHI
2015	0.15	0.13
2016	0.14	0.13
2017	0.12	0.13
2018	0.11	0.15
2019	0.12	0.14

Source: Computed from UN Comtrade Database

6. Intra-Industry Trade

Intra-industry trade is of importance as it can increase and expand markets. The standard indicator is the Index of Intra-industry Trade (IIT). The index can be calculated within individual sectors as well. Intra-industry trade is generally high in case of the manufacturing sector. An increase in IIT may signify a maturing of this sector, and hence, a regular monitoring of this index may be useful.

Intra-industry trade is a common world-wide phenomenon – export and import of the commodities produced by the same industry or sector. The degree to which this occurs is generally measured by the Grubel-Lloyd Index, which is the difference between the exports of the particular sector to a partner country and imports of the products of the same sector from the same partner, divided by the sum of these two, and whole thing obtained subtracted from 1.[8]

In the present case, the Grubel-Lloyd Index values (computed on exports from India to New Zealand and imports from New Zealand to India) in Table 6.1 show that, in 2019, in case of agricultural products and processed farm products, intra-industry trade between India and New Zealand is generally not very high owing to wide differences in soil and climatic conditions, the two countries have little in common as regards crops and food preferences and other agricultural produce and nature of terrain and climatic conditions. However, for dairy products (HS-04), oilseeds (HS-12), cocoa and cocoa preparations (HS-18) and beverages, spirits & vinegar (HS-22), the intra-industry trade is pretty high (> 0.7) between India and New Zealand.

Table 6.1: Grubel-Lloyd Index for India and New Zealand in 2019 – Agricultural and Related Products (Chapters 01-24)

ITC-HS Chapter	Commodity Description	Grubel Lloyd Index
HS-01	Animals; live	
HS-02	Meat and edible meat offal	
HS-03	Fish and crustaceans, molluscs and other aquatic invertebrates	0.03

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8   See Appendix D for the Index of Intra-Industry Trade.

HS-04	Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included	0.91
HS-05	Animal originated products; not elsewhere specified or included	0.35
HS-06	Trees and other plants, live; bulbs, roots and the like; cut flowers and ornamental foliage	0.51
HS-07	Vegetables and certain roots and tubers; edible	0.00
HS-08	Fruit and nuts, edible; peel of citrus fruit or melons	0.15
HS-09	Coffee, tea, mate and spices	0.00
HS-10	Cereals	
HS-11	Products of the milling industry; malt, starches, inulin, wheat gluten	0.00
HS-12	Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit, industrial or medicinal plants; straw and fodder	0.71
HS-13	Lac; gums, resins and other vegetable saps and extracts	0.23
HS-14	Vegetable plaiting materials; vegetable products not elsewhere specified or included	
HS-15	Animal or vegetable fats and oils and their cleavage products; prepared animal fats; animal or vegetable waxes	0.46
HS-16	Meat, fish or crustaceans, molluscs or other aquatic invertebrates; preparations thereof	
HS-17	Sugars and sugar confectionery	0.44
HS-18	Cocoa and cocoa preparations	0.81
HS-19	Preparations of cereals, flour, starch or milk; pastry-cooks' products	0.14
HS-20	Preparations of vegetables, fruit, nuts or other parts of plants	0.03
HS-21	Miscellaneous edible preparations	0.06
HS-22	Beverages, spirits and vinegar	0.78
HS-23	Food industries, residues and wastes thereof; prepared animal fodder	0.53
HS-24	Tobacco and manufactured tobacco substitutes	

Source: Computed from UN Comtrade Database

The same is true for ores and minerals as is shown in table 6.2, as the two countries are differently endowed with these natural resources.

Table 6.2: *Grubel-Lloyd Index for India and* New Zealand *in 2019 – Mineral Products (Chapters 25-27)*

ITC-HS Chapter	Commodity Description	Grubel Lloyd Index
HS-25	Salt; sulphur; earths, stone; plastering materials, lime and cement	0.25
HS-26	Ores, slag and ash	0.53
HS-27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	0.05

Source: Computed from UN Comtrade Database

In chemicals and chemical-based industries shown in Table 6.3 below, IIT values are on the lower end except for HS-29 (Organic Chemicals) with IIT value at 0.74 indicating a relatively high degree of intra-industry trade.

Table 6.3: *Grubel-Lloyd Index for India and New Zealand in 2019 – Products of Chemical or Allied Industries (Chapters 28-40)*

ITC-HS Chapter	Commodity Description	Grubel Lloyd Index
HS-28	Inorganic chemicals; organic and inorganic compounds of precious metals; of rare earth metals, of radio-active elements and of isotopes	0.00
HS-29	Organic chemicals	0.74
HS-30	Pharmaceutical products	0.15
HS-31	Fertilizers	0.00
HS-32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints, varnishes; putty, other mastics; inks	0.06
HS-33	Essential oils and resinoids; perfumery, cosmetic or toilet preparations	0.07
HS-34	Soap, organic surface-active agents; washing, lubricating, polishing or scouring preparations; artificial or prepared waxes, candles and similar articles, modelling pastes, dental waxes and dental preparations with a basis of plaster	0.14
HS-35	Albuminoidal substances; modified starches; glues; enzymes	0.02
HS-37	Photographic or cinematographic goods	
HS-38	Chemical products n.e.c.	0.10
HS-39	Plastics and articles thereof	0.21
HS-40	Rubber and articles thereof	0.34

Source: Computed from UN Comtrade Database

Again, when it comes to chapters dealing with products of plant and animal parts (leather, wood, paper), as included in the groups shown in Table 6.4 below, the intra-industry trade is generally low in value.

Table 6.4: Grubel-Lloyd Index for India and New Zealand in 2019 – Leather, Wood and Paper (Chapters 41-49)

ITC-HS Chapter	Commodity Description	Grubel Lloyd Index
HS-41	Raw hides and skins (other than furskins) and leather	0.10
HS-42	Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silk-worm gut)	0.00
HS-43	Furskins and artificial fur; manufactures thereof	0.54
HS-44	Wood and articles of wood; wood charcoal	0.02
HS-45	Cork and articles of cork	
HS-46	Manufactures of straw, esparto or other plaiting materials; basketware and wickerwork	
HS-47	Pulp of wood or other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard	0.00
HS-48	Paper and paperboard; articles of paper pulp, of paper or paperboard	0.24
HS-49	Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans	0.01

Source: Computed from UN Comtrade Database

The group comprising textiles and clothing, shown in Table 6.5, shows low index values too, except for Headgear and parts thereof (HS-65), with IIT value of 0.78.

Table 6.5: Grubel-Lloyd Index for India and New Zealand in 2019 – Textiles, Textile Articles, Footwear and Headgear (Chapters 50-65)

ITC-HS Chapter	Commodity Description	Grubel Lloyd Index
HS-50	Silk	
HS-51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric	0.08
HS-52	Cotton	
HS-53	Vegetable textile fibres; paper yarn and woven fabrics of paper yarn	
HS-54	Man-made filaments; strip and the like of man-made textile materials	
HS-55	Man-made staple fibres	0.00
HS-56	Wadding, felt and nonwovens, special yarns; twine, cordage, ropes and cables and articles thereof	
HS-57	Carpets and other textile floor coverings	0.07

ITC-HS Chapter	Commodity Description	Grubel Lloyd Index
HS-58	Fabrics; special woven fabrics, tufted textile fabrics, lace, tapestries, trimmings, embroidery	
HS-59	Textile fabrics; impregnated, coated, covered or laminated; textile articles of a kind suitable for industrial use	0.01
HS-60	Fabrics; knitted or crocheted	
HS-61	Apparel and clothing accessories; knitted or crocheted	0.00
HS-62	Apparel and clothing accessories; not knitted or crocheted	0.00
HS-63	Textiles, made up articles; sets; worn clothing and worn textile articles; rags	0.01
HS-64	Footwear; gaiters and the like; parts of such articles	
HS-65	Headgear and parts thereof	0.78

Source: Computed from UN Comtrade Database

The assorted group in Table 6.6 shows low values of IIT for chapters 66 to 71 between India and New Zealand.

Table 6.6: Grubel-Lloyd Index for India and New Zealand in 2019 – Assorted Group of Items (Chapters 66-71)

ITC-HS Chapter	Commodity Description	Grubel Lloyd Index
HS-66	Umbrellas, sun umbrellas, walking-sticks, seat sticks, whips, riding crops; and parts thereof	
HS-67	Feathers and down, prepared; and articles made of feather or of down; artificial flowers; articles of human hair	
HS-68	Stone, plaster, cement, asbestos, mica or similar materials; articles thereof	0.00
HS-69	Ceramic products	0.22
HS-70	Glass and glassware	0.01
HS-71	Natural, cultured pearls; precious, semi-precious stones; precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin	0.03

Source: Computed from UN Comtrade Database

As regards metals and articles made thereof, there is high intra-industry trade (>0.7) in chapters 74 ('Copper and articles thereof') indicating, prima-facie, predominant trade of goods within the same industry (copper) from India to New Zealand. Table 6.7 shows the index values for chapters 72 to 83.

Table 6.7: Grubel-Lloyd Index for India and New Zealand in 2019 – Base Metals and Articles of Base Metals (Chapters 72-83)

ITC-HS Chapter	Commodity Description	Grubel Lloyd Index
HS-72	Iron and steel	0.44
HS-73	Iron or steel articles	0.13
HS-74	Copper and articles thereof	0.78
HS-75	Nickel and articles thereof	
HS-76	Aluminium and articles thereof	
HS-78	Lead and articles thereof	
HS-79	Zinc and articles thereof	
HS-81	Metals; n.e.c., cermets and articles thereof	
HS-82	Tools, implements, cutlery, spoons and forks, of base metal; parts thereof, of base metal	0.15
HS-83	Metal; miscellaneous products of base metal	0.02

Source: Computed from UN Comtrade Database

The last group, half of which are high-end manufactures, show varying values of the Grubel-Lloyd Index, which are moderately high (>0.5) to high (>0.8). In particular, HS-86('Railway, tramway locomotives, rolling-stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signalling equipment of all kinds') and HS-91 ('Clocks and watches and parts thereof') have high intra-industry trade (index value > 0.8). Table 6.8 shows the index values for chapters 84 to 99.

Table 6.8 : Grubel-Lloyd Index for India and New Zealand in 2019 – High-End Manufactured Products, Furniture, Sports Goods and Works of Art (Chapters 84-99)

ITC-HS Chapter	Commodity Description	Grubel Lloyd Index
HS-84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	0.54
HS-85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles	0.53
HS-86	Railway, tramway locomotives, rolling-stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signalling equipment of all kinds	0.83
HS-87	Vehicles; other than railway or tramway rolling stock, and parts and accessories thereof	0.00
HS-88	Aircraft, spacecraft and parts thereof	0.19
HS-89	Ships, boats and floating structures	0.02
HS-90	Optical, photographic, cinematographic, measuring, checking, medical or surgical instruments and apparatus; parts and accessories	0.26

HS-91	Clocks and watches and parts thereof	0.89
HS-92	Musical instruments; parts and accessories of such articles	
HS-93	Arms and ammunition; parts and accessories thereof	0.54
HS-94	Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, n.e.c.; illuminated signs, illuminated name-plates and the like; prefabricated buildings	0.14
HS-95	Toys, games and sports requisites; parts and accessories thereof	0.02
HS-96	Miscellaneous manufactured articles	0.01
HS-97	Works of art; collectors' pieces and antiques	0.00
HS-99	Commodities not specified according to kind	0.54

Source: Computed from UN Comtrade Database

7. Export Similarity

The similarity in the export baskets of two countries, i.e. similarities in the shares of different commodities in the total exports of two countries, is measured by the Export Similarity Index. It is calculated by taking the percentage shares of each commodity (here ITC-HS six digit level commodities have been taken) in both the countries, taking the minimum of the two, and then summing up these minima over all the commodities. The index values vary from 0 to 100, with higher values implying greater export similarity between the countries and thus greater export competition between the two countries.

Table 7.1 shows the values of this index for India and several other countries, including New Zealand.

Table 7.1: Export Similarity Index – India and a few countries

	2015	2016	2017	2018	2019
India-Russia	22.53	17.83	25.31	25.28	25.46
India-Singapore	29.80	24.01	28.04	30.80	30.94
India-South Korea	27.05	27.21	28.10	30.32	31.80
India-Thailand	31.46	31.04	0.00	30.30	30.48
India-China	26.77	27.52	26.97	28.06	30.16
India-USA	32.62	32.00	31.74	31.91	32.89
India-UK	30.99	31.94	31.44	31.00	32.89
India-Germany	29.86	29.61	29.88	30.61	32.11
India-Japan	23.03	23.54	23.87	23.62	24.43
India-New Zealand	15.74	14.66	13.88	13.38	17.11

Source: Computed from UN Comtrade Database

The Export Similarity Index between India and New Zealand is not very high. Table 7.2 below shows that New Zealand's Export Similarity Index values with other countries such as Singapore, South Korea, China, USA, UK, Germany and Japan.

Table 7.2: Export Similarity Index – New Zealand and a few countries

	2015	**2016**	**2017**	**2018**	**2019**
New Zealand-Singapore	15.97	15.33	14.94	15.20	23.19
New Zealand -South Korea	11.68	11.66	10.45	10.03	15.08
New Zealand -China	13.76	13.78	12.82	12.96	20.04
New Zealand -USA	22.68	21.81	22.34	21.85	32.65
New Zealand -UK	22.03	21.86	21.63	19.43	29.67
New Zealand -Germany	21.47	20.83	20.81	20.22	29.49
New Zealand -Japan	14.86	14.81	14.74	14.58	22.65

Source: Computed from UN Comtrade Database

From the above table, the average ESI values are computed between New Zealand and the seven countries, are given as under:

New Zealand -USA	24.27
New Zealand -UK	22.92
New Zealand -Germany	22.56
New Zealand-Singapore	16.93
New Zealand -Japan	16.33
New Zealand -China	14.67
New Zealand -South Korea	11.78

ESI between New Zealand and USA is the highest among the seven countries, implying that these two countries are the closest competitors in the world market for exports in the group of seven countries mentioned above.

VI Resources

- ➢ Oracle Business Intelligence Application, DGCIS
- ➢ UN Comtrade Database
- ➢ Encyclopedia Britannica, https://www.britannica.com/place/New-Zealand
- ➢ ARTICLE IV CONSULTATION— New Zealand: Staff Concluding Statement of the 2021 Article IV Discussions
- ➢ World Trade Organization (WTO) Trade Policy Reviews: New Zealand
- ➢ Human Development Report 2020

VII Appendix

A.   Data on Country Profile

Table A: Country Profile — New Zealand

Country Profile : New Zealand				
	1990	**2000**	**2010**	**2018**
World view				
Population, total (millions)	3.33	3.86	4.35	4.84
Population growth (annual %)	0.9	0.6	1.1	1
Surface area (sq. km) (thousands)	267.7	267.7	267.7	267.7
Population density (people per sq. km of land area)	12.6	14.7	16.5	18.4
Poverty headcount ratio at national poverty lines (% of population)	..	..	..	..
Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population)	..	..	..	..
GNI, Atlas method (current US$) (billions)	45.43	54.32	129.2	203.9
GNI per capita, Atlas method (current US$)	13,640	14,080	29,700	42,110
GNI, PPP (current international $) (billions)	47.42	78.28	129.3	210.7
GNI per capita, PPP (current international $)	14,240	20,290	29,710	43,530
People				
Income share held by lowest 20%	..	..	..	..
Life expectancy at birth, total (years)	75	79	81	82
Fertility rate, total (births per woman)	2.2	2	2.2	1.7
Adolescent fertility rate (births per 1,000 women ages 15-19)	33	28	26	19
Contraceptive prevalence, any methods (% of women ages 15-49)	..	..	..	..
Births attended by skilled health staff (% of total)	..	97	96	96
Mortality rate, under-5 (per 1,000 live births)	11	7	6	5
Prevalence of underweight, weight for age (% of children under 5)	..	..	..	..
Immunization, measles (% of children ages 12-23 months)	90	85	91	92

Primary completion rate, total (% of relevant age group)	..	..	..	..
School enrollment, primary (% gross)	104.7	99.5	101.1	101.1
School enrollment, secondary (% gross)	89	111	119	115
School enrollment, primary and secondary (gross), gender parity index (GPI)	1	1	1	1
Prevalence of HIV, total (% of population ages 15-49)	0.1	0.1	0.1	0.1
Environment				
Forest area (sq. km) (thousands)	93.7	98.5	98.5	98.6
Terrestrial and marine protected areas (% of total territorial area)	..	..	..	30.5
Annual freshwater withdrawals, total (% of internal resources)	0.8	1.2	2.3	3
Urban population growth (annual %)	1.2	0.7	1	1.9
Energy use (kg of oil equivalent per capita)	3,854	4,430	4,225	4,445
CO2 emissions (metric tons per capita)	7.07	8.55	7.3	7.33
Electric power consumption (kWh per capita)	8,972	9,384	9,602	..
Economy				
GDP (current US$) (billions)	45.5	52.62	146.6	207.9
GDP growth (annual %)	0.2	2.9	1.6	3.1
Inflation, GDP deflator (annual %)	2.4	2.8	3.1	0.8
Agriculture, forestry, and fishing, value added (% of GDP)	6	8	7	6
Industry (including construction), value added (% of GDP)	27	24	21	20
Exports of goods and services (% of GDP)	27	36	30	28
Imports of goods and services (% of GDP)	26	33	28	28
Gross capital formation (% of GDP)	20	22	20	24
Revenue, excluding grants (% of GDP)	38.5	33.1	32.4	32.6
Net lending (+) / net borrowing (-) (% of GDP)	-1.9	1.6	-2.6	1.2
States and markets				
Time required to start a business (days)	..	12	1	1

Domestic credit provided by financial sector (% of GDP)	..	..	..	166.7
Tax revenue (% of GDP)	32.7	28.6	26.1	28
Military expenditure (% of GDP)	2.3	1.7	1.4	1.3
Mobile cellular subscriptions (per 100 people)	1.6	40	107.8	134.9
Individuals using the Internet (% of population)	0	47.4	80.5	90.8
High-technology exports (% of manufactured exports)	..	..	10	10
Statistical Capacity score (Overall average)	..	..	..	..
Global links				
Merchandise trade (% of GDP)	42	52	42	40
Net barter terms of trade index (2000 = 100)	..	100	125	147
External debt stocks, total (DOD, current US$) (millions)	..	..	..	..
Total debt service (% of exports of goods, services and primary income)	..	..	..	..
Net migration (thousands)	118	135	91	74
Personal remittances, received (current US$) (millions)	762	215	371	520
Foreign direct investment, net inflows (BoP, current US$) (millions)	1,685	-1,508	286	2,614
Net official development assistance received (current US$) (millions)	..	..	..	..

Source: World Development Indicators database

Figures in blue refer to periods other than those specified.

Data from database:World Development Indicators
Last Updated:03/19/2021

B. Commodities requiring product-specific export-promotion policies

Commodity Code (6-digit)	Commodity Code Description
120991	VEGETABLE SEEDS USED FOR SOWING
151620	VEGTBL FATS AND OILS AND THEIR FRACTNS

Commodity Code	Description
271019	OTHER PETROLEUM OILS AND OILS OBTAIND FROMBITUMINOUS MINERALS ETC
392049	OTHR PLTES SHTS OF POLYMR OF VINYL CHLORID
481019	PAPR/PAPRBORD OTHER THAN ROLLS/SHEETS
490110	PRINTD BOOKS ETC IN SINGL SHEET W/N FOLDED
711311	ARTCLS OF JEWELLERY AND PRTS THEREOF OF SLVR W/N PLTD/CLD WTH OTHR PRCS MTL
711620	ARTICLES OF PRECIOUS OR SEMI PRECIOUS STONES(NATURAL SYNTHETIC/RECONSTRUCTED)
731819	OTHER THREADED ARTICLES
731822	OTHER WASHERS
820890	OTHR KNIVS AND CUTNG BLADES
841440	AIR CMPRSRS MOUNTD ON WHELD CHASIS FR TWNG
842959	OTHER MCHNCL SHOVLS,EXCVTRS AND SHOVL LOADRS
843041	SELF-PROPELLED BORING/SINKING MACHINERY
843420	DAIRY MACHINERY
843890	PARTS OF THE MACHINE OF HEADING 8438
846719	OTHERS PNEUMATIC TOOLS

C. Commodities requiring market-specific export-promotion policies

Commodity Code (6-digit)	Commodity Code Description
100829	OTHER MILLET EXCL SEED
110423	HULLED,PEARLED,SLICD/KIBBLD MAIZE (CORN)
120242	GROUND-NUT, NOT ROASTED OR OTHERWISE COOKED, WHETHER OR NOT SHELLED OR BROKEN-IN SHELLED WHETHER OR NOT BROKEN
120991	VEGETABLE SEEDS USED FOR SOWING
120999	OTHR SEEDS,FRUIT AND SPORES USED FOR SOWING
121190	OTHER : SEEDS :

130219	OTHER : EXTRACTS :
130232	MUCLGS AND THCKNRS W/N MODIFD DERIVD FROM LOCUST BEANS LOCUST BEAN SEEDS/GUAR SEEDS
150890	OTHR REFND GRND NUT OIL AND ITS FRAC-TIONS
151499	OTHER RAPE, COLZA, MUSTERED OILS OTHER THAN CRUDE
151550	SESAME OIL AND ITS FRACTIONS
151620	VEGTBL FATS AND OILS AND THEIR FRACTNS
160521	SHRIMPS AND PRAWNSNOT IN AIRTIGHT CON-TAINER
160529	OTHER SHRIMPS AND PRAWNS (NOT IN AIR-TIGHT CONTAINER)
170113	CANE SUGAR SPECIFIED IN SUBHEADING NOTE 2 TO THIS CHAPTER:
170114	OTHER CANE SUGAR:
170191	SUGR REFIND CONTNG FLVRNG OR CLRNG MAT-TER
170310	CANE MOLSES RSLTD FRM EXTRCTN/RFNG OF SUGR
210111	EXTRCTS ESSNCS AND CNCNTRTS OF COFFE
210120	EXTRCTS ESSNCS AND CNCNTRTS,OF TEA/MATE AND PRPNS WTH A BASIS OF THESE EX-TRCTS,ESSNCS OR CONCENTRATES OR WTH A BASIS OF TE
230400	OIL-CAKE AND OTHR SOLID RESIDUE W/N GRND/IN PLLTS FORM OBTND FRM SOYA-BEAN OIL EXTRCTN
250810	BENTONITE
251400	SLATE W/N ROUGHLY TRMMD/MERELY CUT BY SAWING/OTHRWSE INTO BLKS/SLBS OF A RCT-NGLR AND SQ SHAPE
271019	OTHER PETROLEUM OILS AND OILS OBTAIND FROMBITUMINOUS MINERALS ETC
282732	CHLORIDES OF ALUMINIUM
282739	OTHER CHLORIDE; NES
283110	DITHONITES AND SULPHOXYLATES OF SODIUM
283329	OTHER SULPHATES
291529	OTHR ACETIC ACID AND ITS SLTS
291815	SALTS AND ESTERS OF CITRIC ACID
292320	LECITHINS AND OTHER PHOSPHOAMINOLIPIDS
293220	LACTONES:

293621	VITAMINS A AND THEIR DERIVATIVES
293629	OTHER VITAMINS AND THEIR DERIVATIVES :
300410	MDCMNTS CNTNG PENCLLNS/DRVTVS THROF WTH A PENCLLNC ACID STRCTR/STRPTMYCNS OR THR DERVTVS PUT UP FOR RTL SALE
320210	SYNTHETIC ORGANIC TANNING SUBSTANCES
320290	OTHR INORGANIC TANNING SUBSTANCES
321390	OTHER (OTHER THAN IN SETS)
330130	RESINOIDS
330190	OTHR CONC OF ESNL OILS IN FATS/FIXD/WAX LIKE TRPNC BYPRDCTS OF DETERPENATION OF ESNL OILS AQUS DISTLTS/SOLTN OF ESNL
340111	SOAP AND ORGNC SURFACE ACTV PRDCTS ETC FOR TIOLET USE (INCL MEDICATED PRDCTS)
340213	NON-IONIC W/N FOR RTL SALE
340219	OTHR ORNGC SRFCE-ACTV AGNTS W/N FOR RTL SL
350300	OTHER ALBUMINATES AND OTHER ALBUMIN DRVTVS GELATIN DRVTVS;ISINGLASS; OTHER GLUES OF ANML ORIGIN,EXCL CASEIN GLUES OF HD
380859	
380891	INSECTICIDES
380892	FUNGICIDES:
380893	HERBICIDES, ANTI-SPROUTING PRODUCTS AND PLANT-GROWTH REGULATED:
380899	OTHER:
381190	OTHER PREPARED ADDITIVES ANTI-CORRSIVE PRPNS AND OTHR PRPD ADDITVS
381300	PRPNS AND CHARGES FOR FIRE EXTINGUISHERS CHARGED FIRE-EXTINGUISHING GRENADES
381600	REFRACTORY CEMENT-CORTARS-CONCRETES AND SMLRCMPSTNS OTHR THN PRDCTS OF HDG NO. 3801
382410	PRPD BINDERS FOR FOUNDRY MOULDS/CORES
391731	FLEXIBLE TUBES PIPES AND HOSES HAVING A MINIMUM BURST PRESSURE OF 27.6 MPA
391890	FLOOR COVERING OF OTHER PLASTICS
392049	OTHR PLTES SHTS OF POLYMR OF VINYL CHLORID
392069	PLTES SHTS ETC OF OTHR POLYESTERS
392190	OTHR PLTS,SHTS,FILM FOIL,STRIP ETC,NONCLLR

392329	SACKS AND BAGS (INCL CONES)OF OTHR PLASTICS
401039	OTHR TRANSMISSION BLTS/BELTING OF VULCANISED RUBBER
401120	NEW PNMTC TYRES USED ON BUSES/LORRIES
401170	
401290	OTHER SOLID/CUSHION TYRES,TYRE TREADS AND TYRE FLAPS OF RUBBER
401310	INNER TUBES OF MTR CARS (INCL STATION WAGONS AND RACING CARS) BUSES /LORIES
401694	BOAT/DOCK FENDERS W/N INFLATABLE
420299	OTHR SIMILAR CONTAINERS OF HDNG 4202
420310	ARTICLES OF APPAREL
420340	OTHER CLOTHING ACCESSORIES :
430390	OTHER ARTICLES OF FURSKIN
441400	WOODEN FRAMES FOR PAINTINGS PHOTOGRAPHS MIRRORS OR SIMILAR OBJECTS
441919	
460199	OTHR PLAITING MATERIALS (EXCL VEG MATERLS)
460219	OTHER :
480210	HAND MADE PAPER AND PAPERBOARD
480220	PAPR,PAPRBORD USD AS BASE FOR PHOTO/HEAT ELECTRO SENSITIVE PAPR OR PAPRBORD
480451	KRFT PAPR/PAPRBORD WEING/225G/M2 UNBLCHD
481019	PAPR/PAPRBORD OTHER THAN ROLLS/SHEETS
481149	OTHR GUMMED OR ADHESIVE PAPR AND PAPRBORD
482010	REGISTRS ACCT/NOTE/ORDR/RECPT BOOKS LETR/ MEMO PADS DIARIS AND SMLR ARTCLS OF PAPR
482020	EXERCESE BOOKS
482090	OTHR ARTCLS OF STATIONARY OF PAPR/PAPRBORD
482390	OTHRARTCLS OF PAPR PULP PAPRBORD CELULOSE WADNG OR WEBS OF CEL FIBRS
490110	PRINTD BOOKS ETC IN SINGL SHEET W/N FOLDED
500790	OTHER FABRICS
520300	COTTON CARDED OR COMBED

520813	COTN FABRICS CONTNG>=85% BY WT OF COTN UNBLCHD 3/4 THRED TWILL INCL CROSS TWILL WEIGHNG NOT MORE THN 200 GM PER SQM
520952	PRINTD 3/4 THRED TWILL INCLDNG CROSS TWILLCOTTON FABRICS WEIGHING>200 G/SQM
521031	DYED PLAIN WEAVE MXD COTN FABRICS WEIGHING NOT MORE THN 200 GM PER SQM
521225	OTHR PRINTED WOVEN FBRCS WGHNG >200 G/M2
530919	OTHR FLAX WOVN FABRCS CONTNG FLAX>=85%
531090	OTHR WOVN FABRCS(EXCL UNBLECHD)OF JUTE ETC
540720	WOVEN FABRICS OBTAINED FROM STRIP/THE LIKE
540773	OTHR WOVN FABRCS OF YRNS OF DIFRNT COLORS CNTNG 85% OR MORE BY WT OF SYNTHTC FILMNTS
540793	OTHR SYNTHTIC WOVN FABRCS OF YARNS OF DIFFERENT COLOURS
540794	OTHER WOVEN SYNTHETIC FABRICS,PRINTED
540810	WOVEN FABRICS,OBTAINED FROM HIGH TENACITY YARN OF VISCOSE RAYON
550320	STAPLE FIBRES OF POLYESTER NT CRD/CMBD
560790	OTHER TWINE,CORDAGE,ROPE AND CABLES
560900	ARTCLS OF YRN STRP/THE LKE OF HDNG NO. 5404/5405 TWINE CORDGE-ROP/CBLS N.E.S.
570110	CARPETS AND OTHER TEXTILE FLOOR COVERINGS OF WOOL OR FINE ANIMAL HAIR, KNOTTED
570210	KLM","SCHMCKS","KRMNE" AND SMLR H
570239	CRPTS AND TXTL FLOOR CVRNGS,WOVEN,OF OTHR TXTL MATRLS,OF PILE CNSTRCTN,NOT MADE UP
570241	OTHR CRPTS AND FLOOR CVRNGS OF WOOL/FINE ANIMAL HAIR OF PILE CNSTRCTN,MADE UP
570310	CARPETS AND OTHER TEXTILE FLOOR COVERINGS OF WOOL/FINE ANIMAL HAIR TUFTD,W/N MADE UP
570330	CARPETS AND OTHR TEXTILE FLOOR COVERINGS OF OTHR MN-MDE TXTL MATRL TUFTD,W/N MDE-UP

570390	CARPETS AND OTHR TEXTILE FLOOR COVERINGS OF OTHER TEXTILE MATERIALS,TUFTD W/N MADE UP
590800	TXTL WICKS,WOVEN,PLAITED/KNITTED,FOR LAMPSSTOVES,LIGHERS,CANDLES ETC,INCANDESCENT GAS MANTLES ETC,W/N IMPREGNATED
600590	WARP KNIT FBRCS OF OTHER FIBRES
610333	JACKETS AND BLAZERS OF SYNTHETIC FIBRES
610342	TROUSERS,SHORTS ETC OF COTTON
610520	MEN'S/BOYS' SHIRTS OF MAN-MADE FIBRES
610590	SHIRTS OF OTHR TEXTILE MATERIAL
610711	UNDERPANTS AND BRIEFS OF COTTON
610719	UNDRPNTS AND BRIEFS OF OTHR TEXTILE MATRLS
610819	SLIPS AND PETTICOATS OF OTHER TXTL MATRLS
610821	BRIEFS AND PANTIES OF COTTON
610829	BRIEFS AND PANTIES OF OTHER TEXTILE MATRLS
610899	NEGLIGES BATHROBES ETC OF OTHR TXTL MATRLS
610990	T-SHIRT ETC OF OTHER TEXTILE MATERIALS
611130	BABIES'GARMENTS ETC OF SYNTHIC FBRS
611190	BABIES'GRMNTS ETC OF OTHR TXTL MATRLS
611430	OTHER GARMENTS OF MAN-MADE FIBRES
611699	OTHR GLOVES ETC OF OTHER TEXTILE MATERIALS
620332	JACKETS AND BLAZERS OF COTTON
620349	TROUSERS BIB AND BRACE OVERALLS,BREECHES AND SHORTS OF OTHER TXTL MATERIALS-MEN'S/BOYS'
620443	DRESSES OF SYNTHETIC FIBRES
620444	DRESSES OF ARTIFICIAL FIBRES
620449	DRESSES OF OTHER TEXTILE MATERIALS
620453	SKIRTS AND DIVIDED SKIRTS OF SYNTHETIC FIBRS
620459	SKRTS AND DVDED SKRTS OF OTHER TXTL MATRALS
620469	TROUSERS,BIB AND BRACE OVERALLS,BREECHES AND SHORTS OF OTHER TEXTILE MATERIALS
620520	MEN'S OR BOYS' SHIRTS OF COTTON
620530	MEN'S OR BOYS' SHIRTS OF MAN-MADE FIBRES

620590	SHIRTS OF OTHER TEXTILE MATERIALS
620690	BLOUSES,SHIRTS ETC OF OTHR TXTL MATERIALS
620721	NIGHTSHIRTS AND PYJAMAS OF COTTON
620722	NIGHTSHRTS AND PYJMS OF MAN-MADE FIBRES
620799	OTHER SMLR GARMENTS OF OTHER TXTL MATRLS
620819	SLIPS AND PETTICOATS OF OTHR TXTL MATRLS
620821	NIGHTDRESSES AND PYJAMAS OF COTTON
620822	NIGHTDRESSES AND PYJAMAS OF MAN-MADE FI-BRES
620892	OTHER SMLR GARMENTS OF MAN-MADE FIBRES
621142	OTHR GRMNTS OF COTTON FR WOMEN'S OR GIRLS'
621490	SHWLS,SCRVS ETC OF OTHER TXTL MATERIALS
621590	TIES,BOW TIES ETC OF OTHER TXTL MATERIALS
630120	BLANKETS(OTHER THAN ELECTRIC BLAN-KETS)AND TRVLNG RUGS,OF WOOL OR OF FINE ANIMAL HAIR
630229	PRINTED BED LINEN OF OTHR TXTL MATRLS
630231	OTHER BED LINEN OF COTTON
630259	OTHR TABLE LINEN OF OTHER TEXTILE MATE-RIAL
630299	OTHER LINEN OF OTHER TEXTILE MATERIALS
630399	OTHER CURTAINS OF OTHR TXTL MATERIALS
630520	SACKS AND BAGS OF COTTON
630720	LIFE-JACKETS AND LIFEBELTS
640320	FTWEAR WTH OUTR SOLES OF LTHR AND UPPRS WHICH CONSIST OF LTHR STRPS ACRS THE IN-STEP AND AROUND THE BIG TOE
680229	OTR SMPLY CUT/SWN STNE WTH A FLT EVN SRFCE
680299	OTHER STONE
680410	MLSTNS AND GRNDSTNS FR MLNG,GRNDNG/PULPNG
681019	OTHER (TILES FLAGSTONES ETC)
681099	OTHER ARTCLS OF CEMENT/CONCRETE ETC
681182	OTHER SHEETS, PANELS, TILES AND SIMILAR AR-TICLES
681381	BRAKE LININGS AND PADS
690220	REFRCTORY BRCKS BLOCKS ETC CONTNG BY WT> 50% OF ALUMINA,SILICA/OF MIXTURE OF THESE

690721	
701090	OTHR ARTCLES FOR CNVYNCE/PACKING OF GOODS
701110	GLASS ENVELOPS FOR ELECTRIC LIGHTING
711311	ARTCLS OF JEWELLERY AND PRTS THEREOF OF SLVR W/N PLTD/CLD WTH OTHR PRCS MTL
711411	ARTCLS OF SLVR W/N PLTD/CLD WTH PRCS MTL
711620	ARTICLES OF PRECIOUS OR SEMI PRECIOUS STONES(NATURAL SYNTHETIC/RECON-STRUCTED)
722219	BARS AND RODS NT FRTHR WRKD THN HT-ROLD HT-DRWN/EXTRUDED OTHR THN CIRCLR CRS-SCTN
722240	ANGLES,SHAPES AND SECTIONS
730690	OTHER TUBES,PIPES ETC.OF IRON OR STEEL
730719	OTHER CAST FITTINGS
730840	PROPS AND SMLR EQUIPMENT FOR SCAFFOLD-ING, SHUTTERING OR PIT-PROPPING
731029	OTHR TNKS,CASKS AND SMLR CNTNRS OF CPCTY<50L
731100	CONTAINRS FOR COMPRSD/LQFD GAS OF IRN/STL
731290	PLAITED BAND,SLINGS AND LIKE OF IRON OR STEEL NT ELECTRCALLY INSULATED
731590	OTHER PARTS
731600	ANCHORS,GRAPNELS AND ITS PARTS OF IRN OR STL
731819	OTHER THREADED ARTICLES
731822	OTHER WASHERS
731990	OTHER ARTICLES OF 7319
732112	COOKNG APLNCS AND PLATE WARMRS FOR LQD FUEL
740919	OTHER PLATES,SHEETS ETC OF REFINED COPPER
741121	TUBES AND PIPES OF COPR-ZNC BASE ALOYS(BRAS)
741820	SANITARY WARE AND PARTS THEREOF
790400	ZINC BARS,RODS,PROFILES AND WIRE
820110	SPADES AND SHOVELS
820140	AXES BILLHOOKS AND SIMLR HEWING TOOLS
820310	FILES,RASPS AND SMRL TOOLS
820411	HND-OPRTED SPANERS AND WRENCHS NON-AD-JUSTBLE
820510	DRILLING THREADING OR TAPING TOOLS

820520	HAMMERS AND SLEDGE HAMMERS
820719	OTHER, INCLUDING PARTS
820890	OTHR KNIVS AND CUTNG BLADES
821220	SAFETY RAZOR BLADES INCLD RAZOR BLADE/BLANKS IN STRIPS
830630	PHOTOGRPH,PICTURE/SMLR FRAMES,MIRORS
840212	WTRTUBE BOILRS WTH A STM PRDCTN<=45T/HR
840710	AIR-CRAFT ENGINES
840910	PARTS FOR AIRCRAFT ENGINES
841280	OTHER ENGINES AND MOTORS NES
841311	PUMPS FOR DSPNSNG FUEL/LUBRICANTS,OF THE TYPE USD IN FILLNG STATIONS/IN GARAGES
841420	HAND OR FOOT-OPERATED AIR PUMPS
841440	AIR CMPRSRS MOUNTD ON WHELD CHASIS FR TWNG
842389	OTHER WEIGHING MACHINERY
842959	OTHER MCHNCL SHOVLS,EXCVTRS AND SHOVL LOADRS
843041	SELF-PROPELLED BORING/SINKING MACHINERY
843210	PLOUGHS
843221	DISC HARROWS
843280	OTHER MACHINERY :
843290	PRTS OF AGRCLTRL AND HORTCULTRL MACHIN-ERY
843420	DAIRY MACHINERY
843890	PARTS OF THE MACHINE OF HEADING 8438
846599	OTHER MACHINE-TOOLS OF HDG 8465
846719	OTHERS PNEUMATIC TOOLS
846890	PARTS OF ARTICLES OF HEADING 8468
847420	CRUSHING/GRINDING MACHINES
847431	CONCRETE OR MORTAR MIXERS
848110	PRESSURE-REDUCING VALVES
851230	SOUND SIGNALLING EQPMNT
852380	OTHER:
852873	OTHER, BLACK AND WHITE OR OTHER MONO-CHROME:
853590	OTHR ELCTRCL APPRTS FR SWTCHNG/PROTCTNG ELCTRCL CIRCUITS ETC.FOR A VOLTAGE EXCEEDING 1000 VOLTS
854419	WINDING WIRES OF OTHR METLS,/SUBSTANCES EXCL COPPER
870191	

870192	
870193	
870322	VEHICLES WITH SPARK-IGNITION INTERNAL COMBUSTION RECIPROCATING PISTON ENGINE OF CYLINDR CAPACITY>1000CC BT NT>1500CC
871130	MOTOR CYCL ETC WTH RCPRCTNG INTRNL CMBSTN PSTN ENGN OF CYLNDR CAP>250 C TO 500 CC
871310	INVALID CARRIAGES NT MCHNCLY PRPLD
871499	OTHR PRTSANDACCSSRS OF BICYCLESAND OTHR CYCLES
880390	OTHR PARTS OF GOODS OF HDG 8801 OR 8802
920810	MUSICAL BOXES
930700	SWORDS,CUTLASSES,BAYONETS,LANCES AND SMLR ARMS AND PRTS THROF AND SCABBARDS AND SHEATHS
940389	OTHER
940430	SLEEPING BAGS
950640	ARTICLES AND EQUIPMENT FOR TABLE-TENNIS
960310	BROOMS AND BRUSHES,CONSTNG OF TWIGS/OTHR VGTBL MTRLS BOUND TOGTHR,WTH/WTHT HNDLS
960321	TOOTH BRUSHES
960810	BALL POINT PENS

D.   Trade Indicators

1. Revealed Comparative Advantage Index (RCA): RCA for a commodity exported from a country means the importance of this commodity in the export trade of the country in comparison with the importance of the commodity in world exports. Mathematically,

$RCA_{ij} = (x_{ij}/X_{it})/(x_{wj}/X_{wt})$
where x_{ij} = country i's exports of commodity j
X_{it} = country i's total exports
x_{wj} = world exports of commodity j
X_{wt} = total world exports.
When $RCA_{ij} > 1$, i.e. when j's weight in i's exports (x_{ij}/X_{it}) is more than j's weight in world exports (x_{wj}/X_{wt}), country i is said to have a revealed comparative advantage in commodity j. There is a revealed comparative disadvantage if $RCA_{ij} < 1$. When $RCA_{ij} = 1$, there is neither comparative advantage or disadvantage.

By studying the RCA for a commodity exported from a country over time, it can be seen whether the country in question is gaining in comparative advantage regarding a particular commodity. If

RCA is falling, the reasons require investigation. (xij/Xit) may have risen less or fallen more than proportionately than (xwj/Xwt).

2. One way of checking the reasons for a fall in RCA for a particular commodity is seeing which markets are responsible for this fall. This can be seen from another, slightly different, indicator called Export Specialization Index (ESI).

ESI = (xij/Xit)/(mkj/Mkt), where
mkj = import of commodity j to market k
Mkt= world imports of commodity k.
(mkj/Mkt) gives the weight of j in market k. So, if RCAij is seen to fall, then it can be found out for which markets ESI has fallen. Special attention may then be given to those markets regarding the commodity in question.

3. Like RCA, the revealed comparative import intensity (RCII) can also be measured.
RCII = (mij/Mit)/(mwj/Mwt)
where mij = country i's imports of commodity j
Mit = country i's total imports
mwj= world imports of commodity j
Mwt= total world imports.
This gives an idea whether the proportion of imports of any commodity is more than expected, in terms of the share of that commodity in world imports.

4. Bilateral trade between countries is an important area of trade policy in that bilateral trade agreements are signed to increase trade. However, some points require to be examined before entering into these agreements. Firstly, it is necessary to see whether there is trade complementarity between the two countries. That is, whether the exports of one country match with the imports of the other, and vice versa. Naturally, when trade complementarity is high between two countries, it is beneficial to enter into a trade agreement. If a partner country does not import what India generally exports, there is little point in entering into a trade agreement with that country. The Trade Complementarity Index (TCI) is given as follows:

TCI = 1 – $\sum$ ($|$ mik - xij $|$/2) , where
mik= share of commodity i in the imports of market k
xij = share of commodity i in the exports of country j.
It is evident that TCI can have values between 0 and 1. When these shares, are mik and xij are close to each other, (i.e. when trade complementarity increases) TCI is close to 1. As their difference increases, TCI falls.

TCIW = TCI between a country and the World.
RTCI (Relative Trade Complementarity Index) between country k and country j = (TCI between country k and country j) / (TCI between country k and the world)
RTCI gives a measure of the complementarity between two countries as compared to the complementarity between the first country and the world.

5. But another fact may be checked while proceeding to enter into a trade agreement. The trade between the two countries may already be quite high. This can be measured by the Export Intensity Index (EII).
TII = (xij/Xit)/(xwj/Xwt)

where xij = country i's exports to country j
Xit = country i's exports to the world
xwj = world exports to country j
Xwt = total world exports.
This essentially measures the relative importance of country j in country I's export trade, in comparison with country j's importance as world export destination. EII < 1 or >1 implies less than or more than expected bilateral trade, respectively. If EII is already high, there is little scope of further increasing bilateral trade between i and j. But if is low, and if TCI is high, bilateral trade can very well be increased through trade agreements.

6. A related indicator is the Export Similarity Index (XSI), which helps us identify a country's competitors.
$XSI = \sum [\min(X_{ij}, X_{ik})*100]$
where Xij= share of commodity i in exports of country j
Xik= share of commodity i in exports of country k
XSI can vary between 0 and 100. It will be seen that when Xij= Xik for all i's, XSI = 100, which means complete export similarity between countries j and k. As Xij and Xik start to differ, XSI falls. Countries exporting the same commodities are competitors in the world market, and export strategies, taking in to account such competition, have to be designed accordingly.

7. It is necessary to know whether the exports of a country are concentrated in a few products. A high concentration, while enabling a country to reap the benefits of specialization and economies of scale, also exposes a country to the risks arising from the vicissitudes of global trade. The Hirschman Index (HI), used by UNCTAD, is a handy measure for monitoring export concentration.
$HI = \sqrt{[\sum Sq(x_i/X_t)]}$
where xi is the country's exports of commodity i
Xt is the country's total exports.
HI ranges from (1/n) to 1. The higher the value of HI, the higher the concentration of exports.

8. Intraindustry trade is of importance as it can increase and expand markets. The standard indicator is the Index of Intraindustry Trade (IIT).
$IIT_{jk} = 1 - [\sum |X_{ijk} - M_{ijk}| / (X_{ijk} + M_{ijk})]$
where Xijk = exports of products of industry i from country j to country k
Mijk = imports of products of industry i from country k to country j.
IIT can take values from 1 (extremely high intra-industry trade, exports equaling imports) to 0 (no interindustry trade at all).

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