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Unlocking India–Australia Trade Opportunities: A Multi-Step Assessment of India's Unrealized Export Potential with Australia.

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Abstract:

Purpose - This study investigates the bilateral trade relationship between India and Australia to assess India's unrealized export potential with Australia. This study identifies strategic or key products based on India's unrealized export potential, RCA analysis and tariff analysis that needs high priority to strengthen the bilateral ties between India and Australia.

Design/methodology/approach –The study analyzed the bilateral trade relations using YoY growth for ten years i.e. 2014 to 2023 and CAGR for the period of five years i.e. 2019 to 2023. The data used for the research is sourced from ITC Trade Map and ITC Export Potential Map. To gather tariff rates ECTA agreement 2022 is considered. Balassa (1965) RCA Index is used to investigate the competitiveness of Indian exports.

Findings – The empirical results shows that there is a positive trend in the bilateral trade between these two countries during the reference years, both in terms of year over year growth (YoY) and the five-year compound annual growth rate (CAGR). The combination of Unrealized Export Potential, Revealed Comparative Advantage and Tariff Analysis leads to the identification of thirteen-star products such as Medicaments for retail sale, Semi-milled or wholly milled rice, New Pneumatic tyres of rubber, Women's dresses of cotton etc. and eleven underachiever products such as Mobile phones, Motor Vehicles for transport of goods, Static Converters, Tractors etc.

Keywords: India-Australia Trade Opportunities, Bilateral Trade, Unrealized Export Potential, Export Competitiveness, Revealed Comparative Advantage, Tariff Analysis.

Statements and Declarations

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JEL Codes: F00, F14, F15, F50, F63

1. Introduction

Today India, the world's largest economy with increasing rate of growth provides plethora of business, investment, FDI and economic collaboration opportunities to partner nations. With great signs of recovery from FY2022 after COVID-19 pandemic, Indian thinkers and policy makers working hard to back on track of development path. Indian export that significantly participate in nation's GDP and carries a weighty contribution in Indian employment sector. In this regard, innumerable nations signing treaties including Free Trade Agreements (FTAs) and Reginal Trade Agreements (RTAs) with India to strengthen their bilateral trade statistics and trade spectrum. Concerning this, India and Australia being a major trading partners first launched negotiations in May 2011 with Comprehensive Economic Cooperation Agreement (CECA) that re-launched in September 2021 that appears as Economic Cooperation and Trade Agreement (ECTA). The new negotiation based on a clear vision to liberalize and escalate trade and capitalize on the potential for closer economic partnership between these two partners. The ECTA came into effect on December 29, 2022, after it was signed on April 2, 2022. Earlier also many efforts have

been made as Rudd Labor government worked to develop a framework that make Australia a notable partner with India. (Smith, G, 2010)

Today, the bilateral trade statistics between India and Australia has grown significantly. Over the past five years the exports of India to Australia have escalated at an annualized rate of 54.2% from $460mn in 2017 to $4.01bn in 2022, and export of Australia to India have soared at an annualized rate of 66.4% from $1.51bn in 2017 to $19.3bn in 2022. (OEC World). In 2022-23 India's exports to Australia stood at US$ 6,951.32Mn and imports at US$ 19,011.31Mn with trade balance of -12,059.99 and April 2023-Jan 2024 exports stood at 7,001.97Mn and imports at 13,842.55Mn with trade balance of -6,840.58Mn. (Ministry of Commerce and Industry, Government of India). As per the data, India's exports to Australia are increasing but not at that rate at which negative trade balance can be waved off. India still is on 11th position in Australia importing nations and China is on number 1st position. With decreasing dependence of western countries on China have opened new opportunities to spread its economic position in global arena.

India being a top 10 largest economy in the world in (Forbes's 2024), strong nation largely driven by robust investment and services as per world bank and forecasted growth at 7.2% for FY 2025 (Fitch 2024), it is vital to emphasis more on export sector specifically with FTAs and RTAs signed nations.

Hence, with this, the study focuses on analyzing bilateral trade between India and Australia and to strengthen the India's export sector with respect to Australia by identifying selected commodities so that precise investment can be made in production of these commodities to increase their exports. In this paper the researcher tries to formulate export-led strategy for Australian market to boost investment, accelerate economic growth, improve the macroeconomic stability, fiscal and external balances, inflation rates and unemployment in India.

2. Review Of Literature

The review of the related literature includes studies related to India-Australia bilateral trade and geopolitical relation and other pertinent studies related to it. As very few literatures is available on export potential analysis specifically with these two countries henceforth, the body of literature includes wide array of India-Australia trade relation as well as available literature on export potential analysis.

To review literature related with India-Australia bilateral relation and to assess India's export potential with Australia, Deol O. (2020) conducted an empirical estimation on India's export potential with NON-ASEAN RCEP nations. The objective of this paper is to assess India's merchandise export potential with NON-ASEAN RCEP countries, namely Australia, China, Japan, Korea P R, and New Zealand. This study has employed the gravity model approach of international trade to estimate India's merchandise export potential with these nations in the period from 2005 to 2018. The findings of the study states that among the five NON-ASEAN RCEP countries, India seems to have merchandise export potential only with China. Prior to this, Miankhel A.K. et al. (2013) also explored Australia's export potential. The purpose of the study is to examine the impact of 'behind the border' factors on Australia's export potential. The paper applies a stochastic frontier gravity model on the bilateral trade data of Australia from 2006 to 2008 with its exporting partners. The findings indicate that in a developed economy like Australia, behind the border factors plays a significant role in explaining the reasons for Australia's failure to reach its full export potential.

To review literature related with export potential analysis, Chaudhuri, B.R. & Chakraborty, D. (2010) analyzed the export potential at the State-Level for Karnataka. The Study aims to estimate the regional export potential and to find out the products that have export potential but not have yet achieved it. The study applies revealed comparative production advantage index for each product at the state level on the production data sourced from Annual Survey of Industries for a period of 2003-04 and Agricultural Statistics, 2002-03. The paper also applies Shift Share analysis on the Indian export data collected from Comtrade database for the years 2000-01 and 2005-06 to identify the potential commodities from the demand side. The findings state that there is a significant untapped market for the export of some agricultural items, such as sunflower, groundnut, onion, turmeric, and silk, as well as electrical machinery and precision engineering goods, from the state to other nations.

Furthermore, Sharma V. and Sharma A. (2023) conducted an analysis of India's export potential in South Asia under SAFTA. The purpose of this paper is to examine India's export potential in South Asia considering the signing of the South Asian Free Trade Area (SAFTA). This study uses panel data for the period between 2004 to 2021 to create an augmented gravity model to measure the export potential. The findings of this study states that there is a positive and significant effect of trading countries' gross domestic product (GDP) on India's total exports, whereas the effect of the per capita GDP differential between the countries is negative. The analysis also reveals that India's average export potential was negative with four countries (Nepal, Sri Lanka, Afghanistan, and Bhutan) and positive with three (Pakistan, Bangladesh, and the Maldives) between 2004 and 2021. During this period, India's export potential with Pakistan was the largest. In addition to this, Yadav J. and Singh B. (2023) examined India's Export Potential to Southern African Customs Union nations using the revealed comparative advantage index, the revealed import dependency index, and the Potential bilateral trade equation. This study analyzed the time series data from 2001 to 2020 and finds that India's overall trade value has increased almost six times and India's exports to SACU nations has increased almost ten times during the reference period. The study concludes that India has utilized its potential with South Africa but has not taken advantage of the vast potential with other SACU members.

Likewise, Kelkar H. and Dash P. (2023) applied modern gravity model approach to revisit India's Export Potential. The purpose of the study is to examine the factors such as degree of trade concentration, geographical expansion, export potential and strategic relationship of a country with its trading partners using the modern gravity model approach. The research paper also analyzed India's export intensity and export potential with its 25 major export destinations. The study uses Poisson pseudo-maximum likelihood method for the period 1991–2020 to estimate the results. The findings of the study states that the export trade of a country is a function of trade cost and combined economic size; and India's exports are also impacted by population and islands. The study concludes with its agreement to the Heckscher–Ohlin model that India can increase its export potential with developed countries, as indicated by the export potential index. Additionally, Singh R. et al. (2023) mapped India's export relations with BRICS Countries using Gravity Model Theory. The study uses the Gravity Model theory to calculate India's potential exports to these countries, assess different aspects of India's exports to BRICS, and examine the effects of independent variables on exports. Its goal is to provide a comprehensive understanding of the factors that affects India's exports. The results of the study states that there is a significant growth in India's export from 2001 to recent years. The GDP of India, the population of the BRICS nations, trade openness, distance, and trading affinity are some of the variables that have a positive and significant impact on India's exports; on the other hand, the GDP of the BRICS countries and regulatory efficiency have a negative impact on exports. The study also concludes that India has over exporting situation with Russia.

In this year, Chakrabartty S. and Sinha D. (2024) explored a dynamic framework for assessing the direction of India's export. In this study, a set of destination countries (DCs) and associated export potentiality is used to determine the export direction of a good or industry. This collection helps determine policies aimed at promoting exports from several industries, with a particular nation in mind. It reflects the direction, composition, and value of trade potentials. This paper also proposes the use of bilateral RCA to identify possible markets by determining the direction of India's exports for a given sector.

Hence, the available literature itself reveals the exists gap the literature pertaining to India-Australia export potential analysis. After the signing of ECTA, there is no significant research is available that focuses on identifying competitive products (star products) based on prominent factors like; revealed comparative advantage (RCA), tariffs and demand and supply side gaps.

3. Objective, Data And Methodology

The primary objective of this study is to analyze bilateral trade trends between India and Australia, assess India's export potential in the Australian market, and identify strategic products requiring priority attention to strengthen bilateral trade relations in the post-ECTA era.

To fulfill this research objective a multi-step analysis has been conducted. A systematic methodology consisting of multiple steps has been implemented to analyze bilateral trade and to investigate India's unrealized export potential in reference to Australia.

The ITC Trade Map and the ITC Export Potential Map provided the secondary data that was gathered for this study. The reference period considered for the current research work is 2014–2023.

Step 1: Initially, the percentage share of India's exports and imports to Australia was examined to analyze the trade between the two countries during the span of the last ten years, or from 2014 to 2023. Additionally, the trade balance and the year on year (YoY) growth in India's exports and imports to Australia have been assessed.

Step 2: The percentage share and compound annual growth rate (CAGR) of the top ten exported and imported goods from India have been examined for the last five years, i.e., from 2019 to 2023, in the second stage.

Step 3: After bilateral trade analysis, the researcher identified Indian exported products to Australia based on their export potential rank. The export potential ranked Indian exported products has been retrieved from ITC Export Potential Map.

Step 4: Afterwards, these export potential products further deeply analyzed on basis of realized potential, unrealized potential, Revealed comparative advantage analysis and tariff analysis.

The researcher analyzed the comparative advantage of India's export potential commodities with respect to Australia by using Destination Specific Revealed Comparative Advantage Analysis. India's DS-RCA is explored with respect to Australia, for each of the export potential commodities at their respective HS Code (product-wise) for the period of five years i.e. 2019-2023.

If the DS-RCA value is more than one for a particular commodity for at least three years, then India is found to be competitive in the export of that commodity in reference to Australia.

DS-RCA for a country 'i' for a product category 'j' to country 'k'

$$\mathbf{DS-RCA_{ijk}} = \frac{\mathbf{X_{ijk}} / \mathbf{X_{wjk}}}{\mathbf{X_{ik}} / \mathbf{X_{wk}}}$$

Where,

X_{ijk} : Country 'i' exports in category 'j' to country 'k'

X_{wjk} : World's exports in category 'j' to country 'k'

X_{ik} : Country 'i' total exports to country 'k'

X_{wk} : World's total exports to country 'k'

For tariff analysis or to explore the tariff imposed by Australia on its imports from India. The tariff data is sourced from the Annex 2A of Schedule of Australia of the ECTA agreement signed between India and Australia in 2022.

Step 5: After analysis, based on the results these potential products classified into two broad categories:

1. Product with Splendid Potential: Those products having an unrealized export potential above 50 percent.
2. Product with Good Potential: Those products having an unrealized export potential below 50 percent.

Afterwards, these two broad classifications further sub classified, and these are:

1. Star Products: Those products that are "Competitive" and have "Low Tariff"
2. Underachievers: Those products that are "Non-Competitive" and have "Low Tariff"
3. Winner in distress: Those products that are "Competitive" and have "High tariff"
4. Losers in declining: Those products that are "Non-Competitive" and have "High tariff"

Furthermore, to portray the export-led strategic products, the bubble graph has also been constructed based on the Average Export Value, Average Revealed Comparative Advantage, and Compound Annual Growth Rate for the reference period of five years, i.e. from 2019-2023.

5. India-Australia Bilateral Trade Profile

Given their shared history of British colonization and mutual membership in the British Commonwealth of Nations, India and Australia have developed strong ties. Over time, these relations have continued to grow and deepen. Moreover, the Indian diaspora accounts for 2.9 per cent of Australia's total population and is the second largest migrant community in Australia, after United Kingdom. Between 2014 and 2023, the analysis shows a consistent and growing positive trend in bilateral trade relations.

As illustrated in Table 1 and Figure 1, India's exports to Australia increased significantly, rising from US$ 2.59 billion in 2014 to US$ 7.73 billion in 2023, with highest export value of US$ 8.21 billion in 2022. Similarly, imports from Australia grew from US$ 9.93 billion to US$ 18.54 billion over the same period, with highest import trade value of US$ 19.62 billion in 2022. Despite this growth, the trade balance remained negative throughout the reference period.

Table 1: Bilateral Trade Statistics between India and Australia.

Year	India's Export to Australia (in US Billion Dollars)	India's Import from Australia (in US Billion Dollars)	Trade Balance (in US Billion Dollars)	India's Export to World (in US Billion Dollars)	India's Import from World (in US Billion Dollars)
2014	2.59	9.93	- 7.34	317.54	459.37
2015	3.25	9.41	- 6.15	263.89	390.80
2016	2.95	8.73	- 5.78	260.96	356.69
2017	3.88	14.35	- 10.47	295.86	443.85
2018	3.74	14.13	- 10.38	324.00	509.27
2019	2.97	10.57	- 7.60	323.25	478.88
2020	3.47	7.26	- 3.79	275.49	367.98
2021	6.92	15.10	- 8.19	394.81	570.40
2022	8.21	19.62	- 11.42	452.68	732.57
2023	7.73	18.54	- 10.82	431.42	672.00

Source: ITC Trade Map and Author's Compilation



Figure 1: Bilateral Trade Statistics of India with Australia

Source: ITC Trade Map and Author's Compilation

Referring to Table 2 and Figure 2, the percentage of India's exports to Australia increased from 0.82% to 1.79%, while the percentage of imports from Australia rose from 2.16% to 2.76%. Year-on-year (YoY) growth for India's exports to Australia was positive, except in the years 2016, 2018, 2019 and 2023. Conversely, the YoY growth of India's imports from Australia was negative, except for 2017, 2021 and 2022. This pattern indicates that India is lessening its dependence on imports from Australia.

Table 2: Trade Analytics of India with Australia

Year	% Share of India's Export to Australia	% Share of India's Import from Australia	YoY Growth of India's exports to Australia	YoY Growth of India's imports from Australia	YoY Growth of Trade Balance
2014	0.82%	2.16%	**0.08**	**-0.09**	**-0.13**
2015	1.23%	2.41%	**0.25**	**-0.05**	**-0.16**
2016	1.13%	2.45%	-0.09	**-0.07**	**-0.06**
2017	1.31%	3.23%	**0.31**	0.64	0.81
2018	1.15%	2.77%	-0.03	**-0.02**	**-0.01**
2019	0.92%	2.21%	-0.21	**-0.25**	**-0.27**
2020	1.26%	1.97%	**0.17**	**-0.31**	**-0.50**
2021	1.75%	2.65%	**0.99**	1.08	1.16
2022	1.81%	2.68%	**0.19**	0.30	0.39
2023	1.79%	2.76%	-0.06	**-0.05**	**-0.05**

Source: Author's Compilation

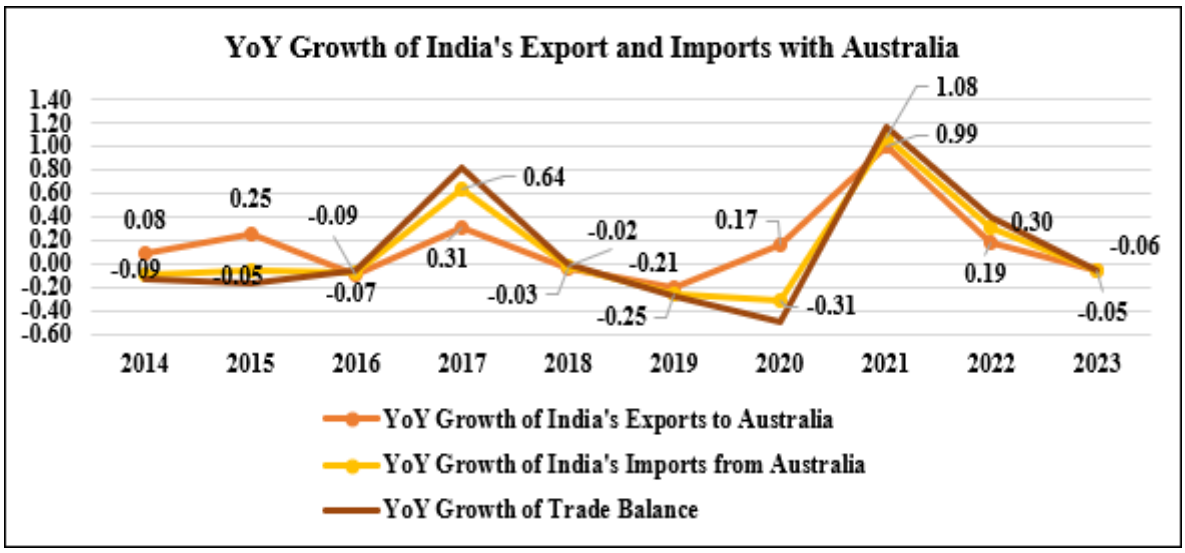


Figure 2: YoY Growth of India's Export and Imports with Australia

Source: ITC Trade Map and Author's Compilation

A detailed analysis of bilateral trade between India and Australia was carried out by looking at the top 10 products exchanged between the two nations from 2019 to 2023. Table 3 presents the top ten products India exports to Australia, along with their percentage share and compound annual growth rate (CAGR). Similarly, Table 4 highlights the top ten products imported by India from Australia, with their respective percentage shares and CAGR.

According to Table 3 and Figure 4, the 5-year compound annual growth rate (CAGR) for all of India's top ten export products is positive. Notably, products such as mineral fuels and oils (HS Code 27), electrical machinery and equipment (HS Code 85), Pharmaceutical products (HS Code 30), nuclear reactors (HS Code 84), vehicles excluding railway or tramway stock (HS Code 87), and Articles of Iron or Steel (HS Code 73) have a CAGR exceeding 10%.

Table 3: Top Ten India's Exports to the Australia (% Share)

S.No.	HS Code (2 digit)	Product	% Share of India's exports to Australia (Product Wise)					5 Year CAGR
			2019	2020	2021	2022	2023	
1	'27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral ...	0.8%	3.0%	5.9%	4.3%	4.1%	**59.7%**
2	'85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television ...	0.9%	1.2%	1.0%	1.3%	1.5%	**29.1%**
3	'30	Pharmaceutical products	1.5%	1.6%	1.8%	2.0%	2.0%	**11.0%**
4	'84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	0.7%	1.0%	1.0%	1.0%	1.2%	**17.4%**

5	'71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad ...	0.7%	0.9%	1.0%	0.9%	0.9%	**2.2%**
6	'73	Articles of iron or steel	1.9%	2.3%	2.6%	2.2%	2.8%	**14.3%**
7	'87	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	0.4%	0.9%	0.9%	1.0%	1.2%	**27.1%**
8	'62	Articles of apparel and clothing accessories, not knitted or crocheted	1.5%	1.8%	2.0%	2.0%	2.3%	**7.2%**
9	'63	Other made-up textile articles; sets; worn clothing and worn textile articles; rags	2.5%	2.7%	2.6%	3.0%	2.9%	**4.2%**
10	'61	Articles of apparel and clothing accessories, knitted or crocheted	1.1%	1.3%	1.6%	1.6%	2.0%	**8.3%**

Source: Author's compilation.

As shown in Table 4 and Figure 4, the 5-year compound annual growth rate (CAGR) for two of the top ten imported products is negative. These include Wool, fine or coarse animal fabric (HS Code 51) and Inorganic Chemicals (HS Code 28). Additionally, the CAGR is below 10% for one product: tanning or dyeing extracts (HS Code 32). However, it exceeds 10% for cotton (HS Code 52), edible vegetables (HS Code 07), and Natural or cultured pearls, precious or semi-precious stones, precious metals (HS Code 71).

Table 4: Top Ten India's Imports from the Australia (% Share)

S.No.	HS Code (2-digit)	Product label	% Share of India's imports from Australia (Product Wise)					5 Year CAGR
			2019	2020	2021	2022	2023	
1	'27	Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	5.4%	5.3%	6.7%	5.8%	5.9%	9.6%
2	'71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin	0.9%	0.8%	1.3%	1.1%	3.3%	35.1%
3	'26	Ores, slag and ash	9.4%	6.6%	16.1%	12.0%	12.2%	22.8%
4	'07	Edible vegetables and certain roots and tubers	2.6%	4.4%	5.7%	10.3%	17.4%	67.8%
5	'28	Inorganic chemicals; organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes	5.9%	5.5%	4.5%	2.7%	3.4%	-3.6%

6	'76	Aluminium and articles thereof	3.0%	3.0%	2.1%	1.8%	3.2%	9.8%
7	'72	Iron and steel	0.8%	1.3%	0.8%	0.6%	1.0%	13.1%
8	'52	Cotton	2.1%	1.3%	9.3%	16.6%	16.5%	32.1%
9	'32	Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints and varnishes; putty and other mastics; inks	4.0%	3.8%	4.4%	4.2%	3.7%	9.3%
10	'51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric	42.2%	36.4%	38.2%	42.3%	39.1%	-0.2%

Source: Author's compilation.

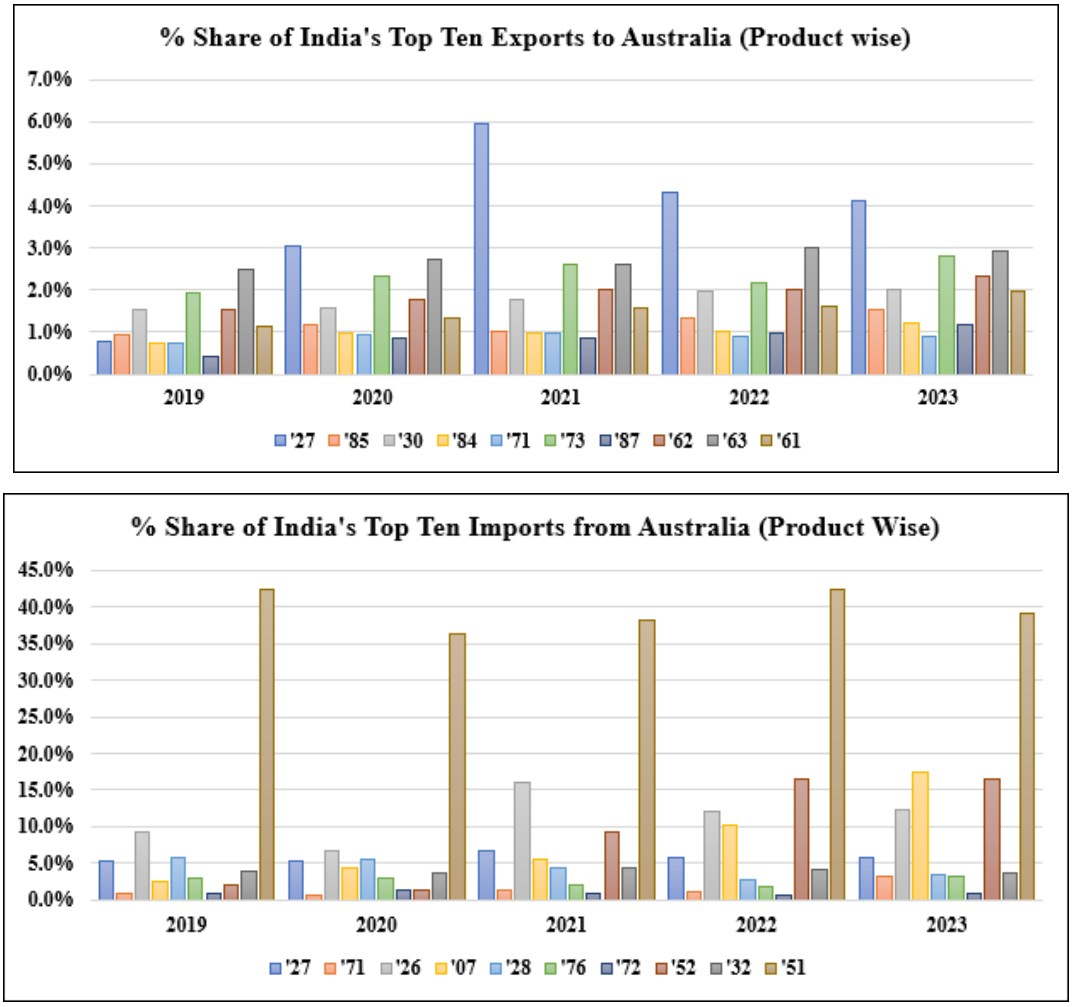


Figure 3: Percentage Share of India's Top Ten Exported and Imported Products from the Australia (At 2 Digits)

Source: Author's compilation.

From the analysis of Table 3, Table 4 and Figure 4 we can conclude that India has been successful in reducing its imports from Australia while increasing its exports, which could aid in improving its trade balance with Australia, currently standing at US$ 10.82 billion in FY23.

As depicted in Figure 4, throughout the reference period, India's exports to Australia had a compound annual growth rate (CAGR) of 0.24%, while its imports from Australia saw a CAGR of 0.13%. These figures highlight that India's exports are growing at a faster pace than its imports from Australia.

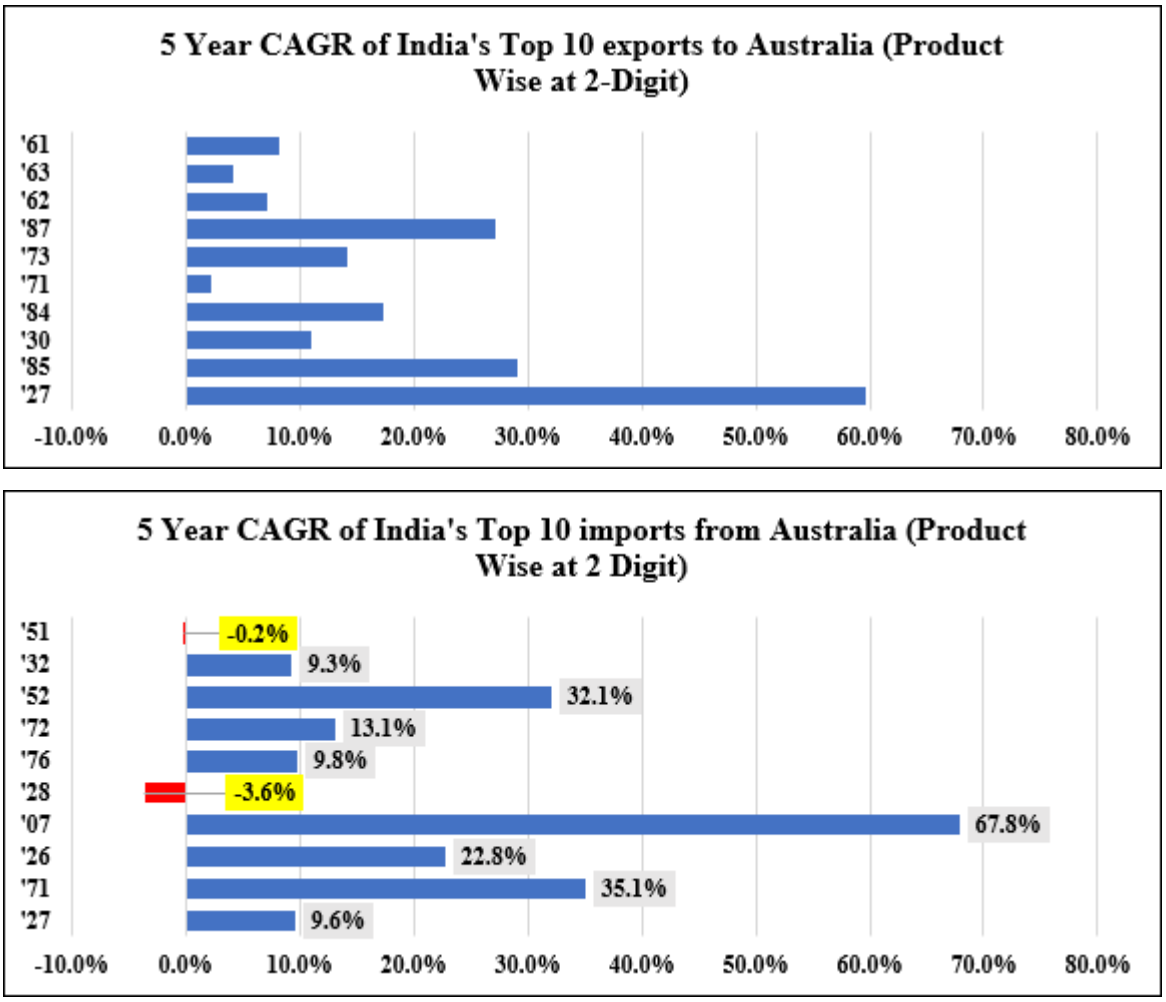


Figure 4: Five-Year CAGR of India's Top Ten Exported and Imported Products

Source: Author's Compilation.

6. Export Potential Of India In Australian Market

After analyzing the bilateral trade between India and Australia, it is imperative to explore the unrealized export potential of India's export market to fill the gap. Figure 5 portrays the export potential rank of Indian products exported to Australia or India's products with high potential to Australia (sourced from ITC Export Potential Map).

In the Figure 5, the 25 commodities are arranged in the ranking order on the basis of their export potential. The number denotes the rank of the commodity. Motor Vehicles for the transport of persons secures the highest rank among the list of India's export potential products to Australia. Other products with the greatest export potential from India to the Australia are Motor vehicles and parts, Jewellery and precious metal articles, pharmaceutical components, Chemicals, Home textiles, mobile phones etc. As we move down the rank, the export potential of the commodities reduces.

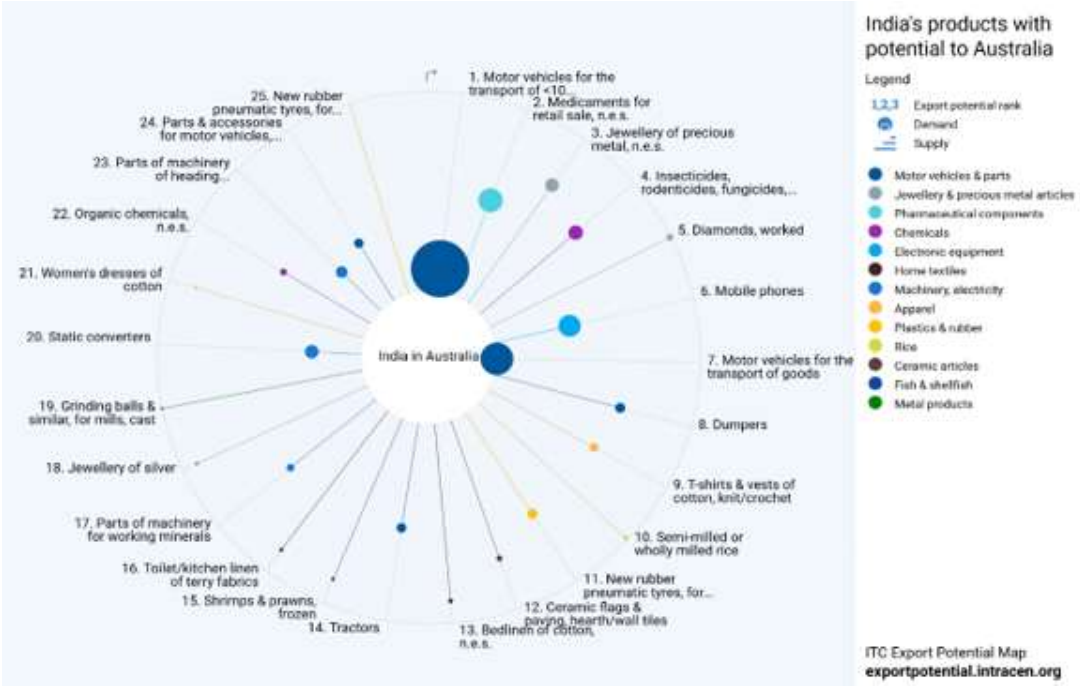


Figure 5: Export Potential Rank of Indian Exported Products to the Australia

Source: ITC: Export Potential Map retrieved on November 6, 2024

Further, Table 5 represents the detailed picture of these products with export potential, realized potential, unrealized potential, realized potential in percentage and unrealized potential in percentage.

Table 5: India's potential products with Australia

Unit: US Million dollars							
Rank	**HS Code**	**Description**	**Export Potential**	**Realized Potential**	**Unrealized Potential**	**Unrealized potential (%)**	**Realized potential (%)**
1	8703	Motor vehicles for the transport of persons, n.e.s.	558	83	475	85%	15%
2	30	Medicaments for retail sale, n.e.s.	420	350	70	17%	83%
3	711319	Jewellery, of precious metal, n.e.s.	292	142	150	51%	49%
4	3808	Insecticides, rodenticides, fungicides, herbicides & similar	227	63	164	72%	28%
5	710239	Diamonds, worked	206	174	32	16%	84%
6	8517	Mobile phones	151	37	115	76%	25%
7	8704	Motor vehicles for the transport of goods	121	4.1	117	97%	3%

8	870410	Dumpers	100	22	78	78%	22%
9	610910	T-shirts & vests of cotton, knit/crochet	91	48	43	47%	53%
10	100630	Semi-milled or wholly milled rice	91	66	24	26%	73%
11	401180	New rubber pneumatic tyres, for industrial machines	90	16	75	83%	18%
12	6907	Ceramic flags & paving, hearth/wall tiles	85	7.2	77	91%	8%
13	630231	Bedlinen of cotton, n.e.s.	80	21	59	74%	26%
14	8701	Tractors	76	27	49	64%	36%
15	306	Shrimps & prawns, frozen	73	0.032	73	100%	0%
16	630260	Toilet/kitchen linen of terry fabrics	61	41	20	33%	67%
17	847490	Parts of machinery for working minerals	55	29	25	45%	53%
18	711311	Jewellery of silver	52	13	40	77%	25%
19	732591	Grinding balls & similar, for mills, cast	45	43	1.5	3%	96%
20	850440	Static converters	43	23	21	49%	53%
21	620442	Women's dresses of cotton	43	27	17	40%	63%
22	29	Organic chemicals, n.e.s.	42	35	7.7	18%	83%
23	843149	Parts of machinery of heading 8426/8429/8430, n.e.s.	42	7.4	35	83%	18%
24	870899	Parts & accessories for motor vehicles, n.e.s.	41	11	31	76%	27%
25	401170	New rubber pneumatic tyres, for agricultural machines	41	25	15	37%	61%

Source: ITC Export Potential Map

Table 5 portrays that the highest unrealized export potential lies in Shrimps and Prawns (HS Code 0306), Dumpers (HS Code 870410), Motor Vehicles for the transport of goods (HS Code 8704), Mobile phones (HS Code 8517), Unglazed ceramics flags (HS Code 6907) etc.

7. Unrealized Export Potential Analysis Of The Indian Export Market

According to Australian Government's Department of Foreign Affairs and Trade, 96 per cent of imports to Australia from India are now tariff free, rising to 100 per cent in four years. The first ECTA tariff cut occurred on 29 December 2022 and the second on 1 January 2023 and the third on 1 January 2024. ECTA is a stepping stone towards a full Australia-India Comprehensive Economic Cooperation Agreement (CECA).

Table 6 illustrates India's competitiveness with Australia in terms of the high export potential products i.e. twenty-five products given in Figure 5. The competitiveness is explored by applying Revealed Comparative Advantage Analysis for a period of five years i.e. from 2019 to 2023. It is found that out of the twenty-five high potential products, fourteen products are competitive i.e. India has comparative advantage in the export of these products to Australia.

Table 6 also illustrates the tariff imposed by Australia on the goods that it imports from India. Since the implementation of the ECTA Agreement, the tariffs are being reduced continuously on annual basis for some commodities (B5 category) and eliminated for most of the commodities (A category). All the high export potential commodities mentioned in the table are tariff-free except for one i.e. Grinding balls & similar, for mills, cast (732591) with 2% tariff duty.

Table 6: Revealed Comparative Advantage (RCA) and Tariff Analysis of Potential Products

S. No.	HS Code	Product	Revealed Comparative Advantage Analysis					Competitive or Non-Competitive	Australia applied tariff to India
			2019	2020	2021	2022	2023		
1	8703	Motor vehicles for the transport of persons, n.e.s.	0.15	0.23	0.14	0.16	0.18	Non-Competitive	0.00%
2	30	Medicaments for retail sale, n.e.s.	2.17	1.95	1.15	1.06	1.37	Competitive	0.00%
3	711319	Jewellery, of precious metal, n.e.s.	10.13	7.59	4.81	3.92	3.95	Competitive	0.00%
4	3808	Insecticides, rodenticides, fungicides, herbicides & similar	5.81	4.79	3.43	2.90	1.78	Competitive	0.00%
5	710239	Diamonds, worked	23.23	18.81	12.62	14.81	10.70	Competitive	0.00%
6	8517	Mobile phones	0.02	0.23	0.05	0.13	0.51	Non-Competitive	0.00%
7	8704	Motor vehicles for the transport of goods	0.01	0.03	0.04	0.14	0.14	Non-Competitive	0.00%
8	870410	Dumpers	0.00	0.04	0.15	0.39	1.22	Non-Competitive	0.00%

9	610910	T-shirts & vests of cotton, knit/crochet	4.59	3.74	2.83	2.82	3.14	Competitive	0.00%
10	100630	Semi-milled or wholly milled rice	21.29	17.54	10.54	10.42	12.51	Competitive	0.00%
11	401180	New rubber pneumatic tyres, for industrial machines	0.90	0.77	0.66	0.72	0.77	Non-Competitive	0.00%
12	6907	Ceramic flags & paving, hearth/wall tiles	0.86	1.00	0.62	0.81	1.04	Non-Competitive	0.00%
13	630231	Bedlinen of cotton, n.e.s.	1.22	1.35	2.24	4.03	2.94	Competitive	0.00%
14	8701	Tractors	0.97	1.20	0.77	0.88	0.37	Non-Competitive	0.00%
15	306	Shrimps & prawns, frozen	0.14	0.09	0.10	0.05	0.07	Non-Competitive	0.00%
16	630260	Toilet/kitchen linen of terry fabrics	18.17	17.24	9.30	8.31	11.08	Competitive	0.00%
17	847490	Parts of machinery for working minerals	4.45	4.14	2.18	2.52	2.10	Competitive	0.00%
18	711311	Jewellery of silver	5.82	3.85	2.73	2.33	2.61	Competitive	0.00%
19	732591	Grinding balls & similar, for mills, cast	21.38	21.99	14.73	12.30	11.46	Competitive	2.00%
20	850440	Static converters	0.50	0.61	0.57	0.55	0.62	Non-Competitive	0.00%
21	620442	Women's dresses of cotton	12.90	10.39	6.72	6.00	7.22	Competitive	0.00%
22	29	Organic chemicals, n.e.s.	1.52	1.09	0.72	0.74	1.08	Competitive	0.00%
23	843149	Parts of machinery of heading 8426/8429/8430, n.e.s.	0.16	0.11	0.18	0.08	0.17	Non-Competitive	0.00%

24	870899	Parts & accessories for motor vehicles, n.e.s.	1.17	1.10	0.86	0.74	1.00	Non-Competitive	0.00%
25	401170	New rubber pneumatic tyres, for agricultural machines	19.69	17.92	12.21	11.08	14.75	Competitive	0.00%

Source: Author's Compilation based on ITC Trade Map retrieved on November 6, 2024.

Based on Table 5 and Table 6, the researcher classified these products into two broad categories and four sub-categories under them.

The broad classification is based on the percentage of the unrealized export potential for the commodity. The commodities having an unrealized export potential above 50 percent are classified as "Products with Splendid Potential" and those having an unrealized export potential below 50 percent are classified as "Products with Good Potential".

The sub-classification is based on the India's export competitiveness with Australia and Tariff-duty imposed by Australia on its imports from India. The commodities in which India is competitive, and the tariff-duty is low are classified as "Star Products". The commodities in which India is non-competitive, and the tariff-duty is low are classified as "Underachievers". The commodities in which India is competitive, and tariff-duty is high are classified as "Winner in distress". The commodities in which India is non-competitive, and tariff-duty is high are classified as "Losers in declining".

The Star Products should be given the highest priority in terms of policy integration, followed by Underachievers and Winners in distress.

Figure 6 portrays the classification of the potential products based on India's unrealized export potential for the product with Australia, India's export competitiveness with Australia (product-wise) and Australia's tariff on India's export (product-wise). The figure shows that there are four Star products with splendid potential (>50%) and nine Star products with good potential (<50%). Therefore, the policy makers should target these products while trading with Australia as they have a great unrealized potential that needs to be explored to increase India's export value with Australia. Hence, policies should be designed in a manner to focus on the export of these thirteen Star products. Since the tariff is low i.e. zero in most cases, it makes these products more competitive in terms of price in Australian market.

Figure 6 also illustrates ten underachievers with splendid potential and one underachiever with good potential. Since, for these products India is currently non-competitive in its exports to Australia, the policy makers must undertake some measures to increase the efficiency of the manufacturing process of these products. By making the production process more efficient, India can reduce the cost of production and improves the quality of the product and as a result making these products competitive with Australia in the upcoming years. The tariff rates are low for this category, hence there is no quantitative barrier to entry and the improved quality can pass the non-tariff barriers also.

As shown in Figure 6, there is one winner in distress with good potential i.e. Grinding balls & similar, for mills, cast (HS code – 732591). For this commodity, the current tariff rate is two percent, which will reduce to one percent on January 1, 2025, and to zero percent on January 1, 2026, as per the guidelines of the India's ECTA agreement with Australia. The product is currently competitive in Australian market; therefore, the focus should be more on export incentives as compared to production incentives. Since, the tariff rates will decline gradually in the upcoming years, it will automatically make this product more price competitive in Australian market.

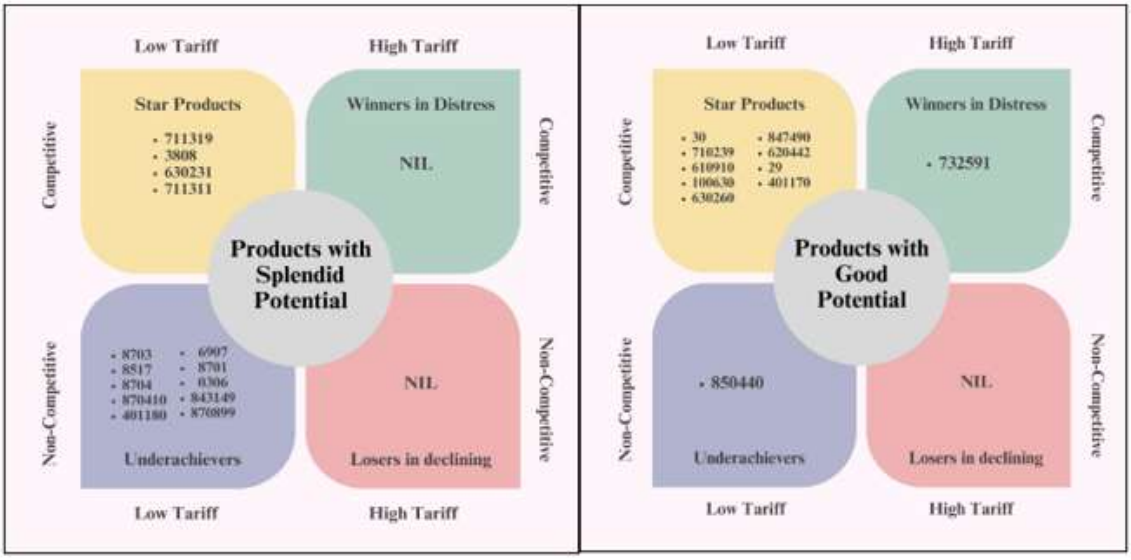


Figure 6: Classification of Potential Products based on Unrealized Export Potential, RCA and Tariff Analysis

Source: Author's Compilation

After identifying the thirteen Star products which are duty-free and competitive, we plot them based on their Average RCA value and CAGR for 5-years i.e. from 2019-2023. Table 7 illustrates the analysis of Star products based on average export value, RCA and CAGR for five years.

Table 7: Star Products Analysis (2019-2023)

S. No.	HS Code	Product	Average Export Value (in US Thousand Dollar)	Average RCA	CAGR
1	30	Medicaments for retail sale, n.e.s.	340035	1.54	11.00%
2	710239	Diamonds, worked	141885	16.03	-3.00%
3	711319	Jewellery, of precious metal, n.e.s.	129971.2	6.08	4.79%
4	3808	Insecticides, rodenticides, fungicides, herbicides & similar	86737.8	3.74	5.90%
5	100630	Semi-milled or wholly milled rice	64613.8	14.46	5.43%
6	29	Organic chemicals, n.e.s.	50744.2	1.03	4.32%
7	610910	T-shirts & vests of cotton, knit/crochet	41700.2	3.42	9.12%
8	630260	Toilet/kitchen linen of terry fabrics	36083.6	12.82	7.35%
9	847490	Parts of machinery for working minerals	27341.2	3.08	7.64%
10	620442	Women's dresses of cotton	21766.2	8.65	18.52%
11	401170	New rubber pneumatic tyres, for agricultural machines	20760	15.13	14.29%
12	711311	Jewellery of silver	12202.4	3.47	-2.42%
13	630231	Bedlinen of cotton, n.e.s.	10887.2	2.36	35.15%

Source: Author's Compilation based on ITC Trade Map

Figure 7 portrays the bubble graph for the Star products. The size of the bubble is determined by the average export value for five years. The smaller the size of the bubble, the smaller will be its average exports value and vice-versa.

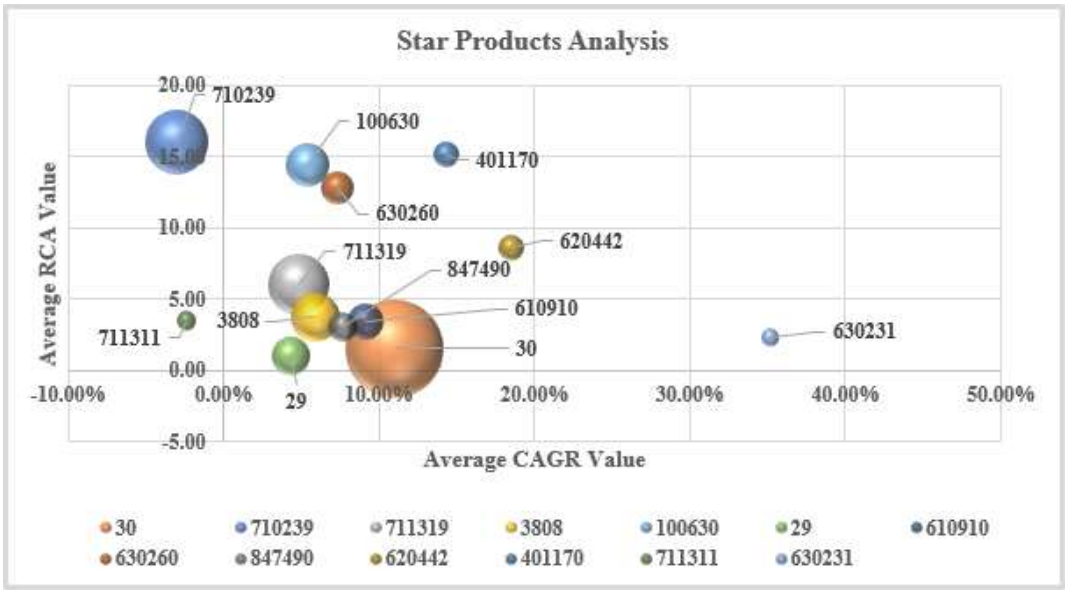


Figure 7: Star Products

Source: Author's Compilation

As illustrated in Table 7 and Figure 7, Medicaments for retail sale, n.e.s. (HS Code 30) has the highest average export value with a CAGR of eleven percent i.e. for the period of five years from 2019-2023, India's exports of medicaments/pharmaceuticals products grew at an average rate of 11 percent per year.

As per Table 7 and Figure 7, the star products with high RCA value, positive CAGR and high Export value are Semi-milled or wholly milled rice (HS Code 100630), Toilet/Kitchen Linen of terry fabrics (HS Code 630260), New pneumatic tyres, of rubber (HS Code 401170) and Women's dresses of cotton (HS Code 620442).

Table 8: Underachiever Products Analysis (2019-2023)

S. No.	HS Code	Product	Average Export Value (in US Thousand Dollar)	Average RCA	CAGR
1	8703	Motor vehicles for the transport of persons, n.e.s.	71443.6	0.17	32.49%
2	8517	Mobile phones	40504.8	0.19	124.85%
3	8704	Motor vehicles for the transport of goods	18410.6	0.07	110.95%
4	870410	Dumpers	11666.4	0.36	-
5	401180	New rubber pneumatic tyres, for industrial machines	14587	0.76	13.40%

6	6907	Ceramic flags & paving, hearth/wall tiles	6316.6	0.87	20.60%
7	8701	Tractors	22425.8	0.84	11.64%
8	0306	Shrimps & prawns, frozen	468.2	0.09	3.72%
9	850440	Static converters	16052.8	0.57	30.00%
10	843149	Parts of machinery of heading 8426/8429/8430, n.e.s.	3450	0.14	26.48%
11	870899	Parts & accessories for motor vehicles, n.e.s.	10414.8	0.97	14.86%

Source: Author's Compilation based on ITC Trade Map

As illustrated in Table 8 and Figure 8 , the underachieved products with low RCA value, positive CAGR and high Export Value are Mobile Phones (HS Code 8517), Motor vehicles for the transport of goods (HS Code 8704), Static converters (HS Code 850440), Tractors (HS Code 8701) and Motor vehicles for the transport of persons, n.e.s. (HS Code 8703). The policymakers can focus on the measures to make these products competitive in international markets by providing production-based incentives to the manufacturers of these products.

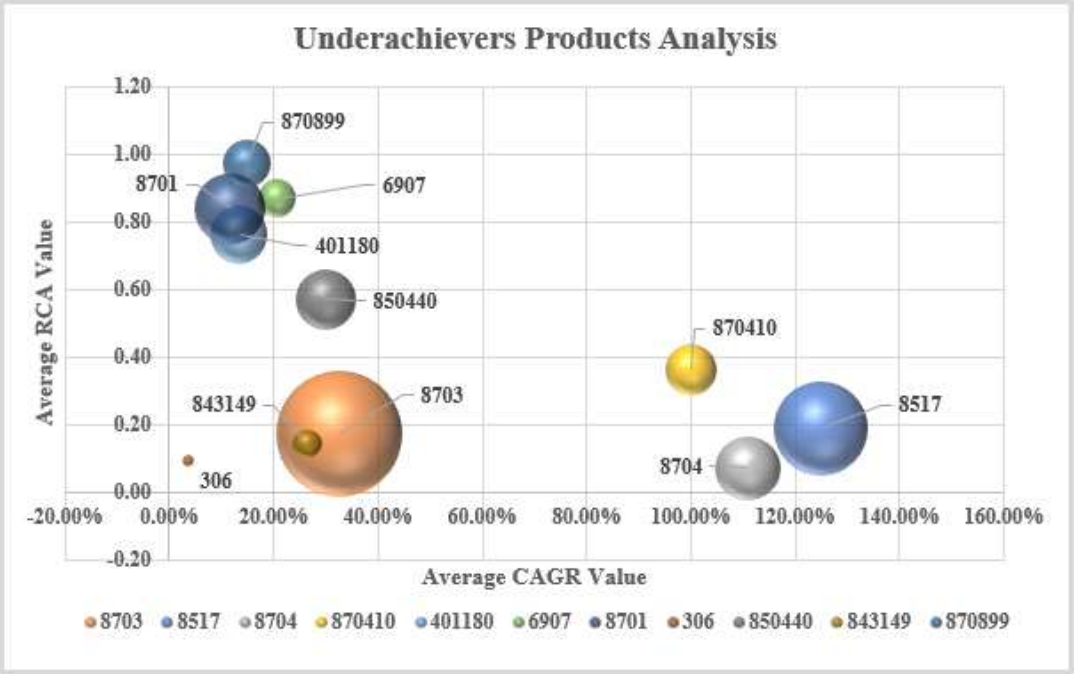


Figure 8: Underachievers Products

Source: Author's Compilation

7. Conclusion

An important milestone in India's bilateral trade relations with Australia was reached in 2022 with the signing of the ECTA Agreement. The implementation of the agreement has widened the scope to expand the trade and

commerce between the two countries. The tariff-free exports from India to Australia would make our commodities more price-competitive in the Australian market in comparison with the similar exports from rest of the world.

There is a positive trend in the bilateral trade statistics between the two countries signifying the increase in the strength of the economic relations. The exports of commodities like Mineral fuels (HS Code 27) have shown an annual growth rate of 59.7% during the reference period of five years. The YoY growth rate trend suggest that India is trying to lessen its dependence on imports from Australia to improve its trade balance which is negative throughout the reference period.

As per the Export Potential analysis, there are top twenty-five ranked commodities with highest export potential in India with respect to Australia. Motor vehicles for the transport of persons, n.e.s. (HS Code 8703) has the highest potential value and is ranked one in the list.

As per the Revealed Comparative Advantage Analysis, fourteen out of these twenty-five commodities that India exports to Australia are found to be competitive.

The unrealized export potential analysis, tariff analysis and the competitiveness analysis leads to the identification of four-Star Products and ten Underachiever Products under Splendid Potential Category and nine Star Products, one Underachiever and one Winners in Distress under Good Potential Category.

As per the Star Products Analysis, Medicaments for retail sale, n.e.s. (HS Code 30) has the highest average export value with a CAGR of eleven percent i.e. for the period of five years from 2019-2023. Similarly, Semi-milled or wholly milled rice (HS Code 100630), Toilet/Kitchen Linen of terry fabrics (HS Code 630260), New pneumatic tyres, of rubber (HS Code 401170) and Women's dresses of cotton (HS Code 620442) are some of the identified Star Products to be focused.

As per the Underachiever Products Analysis, Mobile Phones (HS Code 8517), Motor vehicles for the transport of goods (HS Code 8704), Static converters (HS Code 850440), Tractors (HS Code 8701) and Motor vehicles for the transport of persons, n.e.s. (HS Code 8703) are some of the Underachiever Products to be focused.

8. Originality Of The Research

The originality of this research lies in its comprehensive and multi-dimensional approach to analyzing the bilateral trade between these two countries. By incorporating a combination of Unrealized Export Potential, Revealed Comparative Advantage (RCA), and Tariff Analysis, the study offers a novel framework for identifying both star products and underachiever products to increase trade statistics of India to Australia.

9. Policy Implications

The present research work is important for Indian exporters, policy makers and thinkers to construct export led strategies with Australian market. The identified star products and underachievers product must be highly prioritized by Indian exporters and policy makers to strengthen the bilateral ties between India and Australia in future arena.

10. Further Research Directions

- This study identifies strategic or key products based only on India’s unrealized export potential, RCA analysis and tariff analysis. Other key factors may also be used to analyze unrealized exports potential of India with Australia.
- The identification of "star" and "underachiever" products assumes that trade dynamics remain relatively stable over the reference period, which may not be the case. Rapid technological changes, shifts in consumer demand, or geopolitical events could disrupt established trade patterns.
- The analysis may not sufficiently consider non-tariff barriers (e.g., quotas, subsidies, regulatory barriers) that could have impacted the trade performance of specific products, affecting their identified status as star or underachiever.

11. Conflict Of Interest

All authors declare that they have no conflicts of interest.

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