Self-Reliance Of Pharmaceutical, Textile And Defence Industries After Completing A Decade Of Launching Make In India

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Abstract:

The impact of Make in India (MII) initiative on the self-reliance of Indian Industries after completing a decade of its launch has been studied in this research. A case study research method was employed to evaluate trade performance of selected Pharmaceutical, Textile, and Defence industries from CY13-22. Their self-reliance was measured quantitatively, in an absolute and relative sense, through 2 variables: Trade Balance (Export Revenue-Import Expenditure > 0) and Self-reliance Ratio (Export Revenue/ Import Expenditure > 1). The improvement in the self-reliance status of chosen industries was then assessed with CAGR of aforementioned 2 self-reliance variables. The GoI initiatives were also covered for a qualitative analysis and discover a scope of value addition to exports of respective industries. Both Pharmaceutical and Textile industries have become self-reliant but the latter has shown lack of growth in its self-reliance. Whereas, Defence industry of India is yet to achieve self-reliance. A scope of export value addition was discovered in each industry. Hence, self-reliance is the value addition capability of a nation after minimizing or eliminating the import dependency and preserve its sovereignty.

Keywords: Self-reliance, Make in India (MII), Trade Balance (TB) and Self-reliance Ratio (SR Ratio).

Purpose of the paper:

This paper attempts to explore the progress of India's self-reliance as its response to the uncertainties associated with Globalization after 10 years of launching the

Make in India Initiative in 2014. Paper studies the export and import of India's Defense, Textile and Pharmaceutical Industry in the past decade, to highlight their contribution towards Trade-surplus and discover the scope of diversifying Indian Trade Portfolio considering the constituents of exports from these industries. The objectives of paper are as follows:

a. To measure self-reliance of India's Defense, Textile and Pharmaceutical Industry for every year from CY13 to CY22.

b. To study the trade constitution of selected industries to discover scope of value-added exports.

c. To study the progress of Make in India in terms of CAGR of selfreliance variables over the decade.

d. To analyze progress of the industry specific initiatives taken to make them self-reliant

Research Methodology:

I have employed case study design because it possesses the merit of a full contextual analysis. The time and financial constraint factors were also considered in setting the Research Design. The study undertakes in-depth analysis of data pertaining to Exim matters of most pertinent industries chosen, for research to be conducted more exhaustively, namely Defence, Textile and Pharmaceutical.

I have applied Case Study Research Method to study, analyze, interpret and assess the real scenario using both qualitative and quantitative techniques. The initiatives undertaken by government in past decade CY13-22, to make chosen industries self-reliant have also been covered. The Exim data of the 3 industries is collected and analyzed to assess the impact of MII initiatives.

Mean and percentage trade values are computed to study the data in its absolute and relative sense. Thereafter, Trade Balance and Self Reliance (SR) Ratio are computed and their CAGR of 10 years is tracked to discover the self-reliance status of the industries.

Trade Balance and SR Ratio are the chosen variables for measuring self-reliance: the value addition capacity of an industry after minimizing or eliminating the need to import value added goods from other economies. TB views self-reliance in an absolute sense, covering the surplus as a component of export value. SR Ratio views self-reliance in a relative sense, revealing the trade surplus with reference to import value of the industry.

Trade Balance = Export Revenue – Import Expenditure

SR Ratio = Export Revenue / Import Expenditure

The study relies on these two variables to give a comprehensive view of the self-reliance status of 3 industries.

Literature Review:

An extensive review of earlier studies across multiple academic databases using relevant keywords such as "self- reliance," "trade and development," and "indigenization "is taken. Overseas and inland published articles were included in the review. Certain research gaps in terms of a sound technical analyses of selected industries, overview of the initiatives taken to improve their status over the past decade considering Make in India as well as Aatmannirbhar Bharat and the scope to add to their self-reliance are discovered. This study attempts to fill such research gaps.

Originality/Value:

A case study research method was employed to evaluate trade performance of selected Pharmaceutical, Textile, and Defense industries from CY13-22. Their self-reliance was measured quantitatively, in an absolute and relative sense, through 2 variables: Trade Balance (Export Revenue- Import Expenditure > 0) and Self-reliance Ratio (Export Revenue/ Import Expenditure > 1). The improvement in the self-reliance status of chosen industries was then assessed with CAGR of aforementioned 2 self-reliance variables. The Government of India initiatives were also covered for a qualitative analysis and discover a scope of value addition to exports of respective industries. Both Pharmaceutical and Textile industries have become self-reliant but the latter has shown lack of growth in its self-reliance. Whereas, Defence industry of India is yet to achieve self-reliance. A scope of export value addition was discovered in each industry. Hence, self-reliance is the value addition capability of a nation after minimizing or eliminating the import dependency and preserve its sovereignty.

Major Findings:

Based on an extensive study of Exim data of Pharmaceutical, Textile and Defense industries from Calendar Year 2013-2022 following major findings and conclusion have been made:

● 10 years after Introduction of Make in India initiative the Pharmaceutical and Textile industry have been self-reliant.

● Defence industry was self-reliant in 2021 after recovering from Covid19 but witnessed a negative Trade Balance and an SR Ratio less than 1 in 2022. Hence, it is yet to accomplish self-reliance.

● Since the launch of Make in India, Pharmaceutical industry has witnessed an improvement in its self-reliance status while Textile and Defence industries have shown an absence of growth in their self-reliance status.

- The Pharmaceutical, Textile and Defence Industries have achieved combined self-reliance status in the past decade.

- Last 10 years combined CAGR of Pharmaceutical, Textile and Defence Industries has slowly regressed. Had no pandemic occurred and keeping other factors constant, it would have been different.

- A scope of export value addition was discovered in Pharmaceutical, Textile and Defence Industries in terms of production of new products.

1. Introduction

The term 'Self-Reliance' was coined by the American transcendentalist philosopher Ralph Waldo Emerson in the year 1841. Emerson prefaces his essay with a Latin phrase which translates as: 'Do not seek yourself outside yourself.' It is the state of being self-sufficient and capable of making decisions and acting without relying on external sources of support or validation. At its core, self-reliance is about having confidence in one's own abilities and judgment. It involves being willing to take responsibility for one's own life and to pursue one's own goals and dreams, rather than simply following the expectations of others or conforming to societal norms.

India should focus on both global and inland markets to become truly self-reliant. The Self-Reliance signifies neither any inclusive or protectionist policies but involves creation of a helping hand to the entire world seeking to promote a balance between global interdependence and complete autonomy.

2. Make in India (MII)

The Make in India initiative was started by Prime Minister in September 2014 as part of a wider set of nation-building initiatives. Devised to transform India into a global design and manufacturing hub, MII was a timely response to a critical situation. By 2013, the merit of being an emerging market had worn out, and India's growth rate had reduced to its lowest level in past 10 years. MII was launched by Prime Minister against the backdrop of this crisis and quickly became a powerful force for India's numerous stakeholders and partners. It was a powerful call to action to India's citizens and business leaders, and an invitation to possible partners and investors around the world.It reflects a complete change of the government's mindset – a shift from issuing authority to business partner, in alignment with Prime Minister's vision of 'Minimum Government, Maximum Governance.' The initiative aimed to attract both domestic and foreign investment in key sectors, promote innovation, foster job creation, and enhance India's competitiveness in the global market.

3. Aatmanirbhar Bharat Abhiyan

Aatmanirbhar Bharat Abhiyan or Self-reliant India Campaign is a special economic relief package of Rs. 20 lakh crores announced in 2020 with dual objective of reviving Indian Economy from the aftereffects of Covid -19 induced lockdown and to make the economy self-reliant.

Aatmanirbhar Bharat resonates with Make in India as the latter has laid the foundation for the former, underscoring their resemblance for achieving self-sufficiency but they differ on certain grounds. Make in India was launched to boost productivity and employment generation capacity of an amateur manufacturing sector by adding to ease of doing business in India that will help garner private investments and foreign capital.

4. Need of the Study:

Globalization has squeezed nation-states unevenly across time and space, in the process, enhancing opportunities on the one hand and dissimilarities and hegemonies on the other. Accordingly, nation-states have retorted inversely to the changed scenario. Most common being the imitation of western thoughts, technology etc. under the notion not defying western superiority, resulting in nations' losing their self-identity, thereby, reducing the world into a zone of monotony

This paper attempts to explore the progress of India's response to the uncertainties associated with Globalization after 10 years of launching the
Make in India Initiative in 2014. Paper studies the export and import of India's Defense, Textile and Pharmaceutical Industry in the past decade, to highlight their contribution towards Trade-surplus and discover the scope of diversifying Indian Trade Portfolio considering the constituents of exports from these industries.

5. Objectives of Study

a.   To *measure self-reliance* of India's Defense, Textile and Pharmaceutical Industry for every year from CY13 to CY22.
b.   To *study the trade constitution* of selected industries to discover scope of value-added exports.
c.   To study the progress of Make in India *in terms of CAGR* of self-reliance variables over the decade.
d.   To analyze progress of the *industry specific initiatives* taken to make them self-reliant.

5. Statement of Hypothesis

H1: India's Pharmaceutical Industry have become self-reliant after ten years of Making in India.

H2: India's Textile Industry have become self-reliant after ten years of Making in India.

H3: India's Defence Industry have become self-reliant after ten years of Making in India.

H4. India's Pharmaceutical, Textile and Defence industries have together become self-reliant after ten years of Making in India.

6. Universe and Sample Size

a.   Universe of this study is the export and import of Indian industries from CY13 to CY22.
b.   Sample constitutes of 3 industries' namely, Pharmaceutical, Textile and Defense Industry, covering a decade of export and import after launch of MII Program.
c.   From chosen industries one caters to war time needs while other two peace time ones cater to the necessities of life to survive.

7. Research Design

Researcher has employed case study design because it possesses the merit of a full contextual analysis. The time and financial constraint factors were also considered in setting the Research Design. The study undertakes in-depth analysis of data pertaining to Exim matters of most pertinent industries chosen, for research to be conducted more exhaustively, namely Defence, Textile and Pharmaceutical.

Mean and percentage trade values are computed to study the data in its absolute and relative sense. Thereafter, Trade Balance and Self Reliance (SR) Ratio are computed and their CAGR of 10 years is tracked to discover the self-reliance status of the industries. Trade Balance and SR Ratio are the chosen variables for measuring self-reliance: the value addition capacity of an industry after minimizing or eliminating the need to import value added goods from other economies. TB views self-reliance in an absolute sense, covering the surplus as a component of export value. SR Ratio views self-reliance in a relative sense, revealing the trade surplus with reference to import value of the industry.

Trade Balance = Export Revenue – Import Expenditure
SR Ratio = Export Revenue / Import Expenditure

8. Sources of Data

ITC Trade Map	Centre for Monitoring Indian Economy (CMIE)	Ministry of Commerce and Industry
Directorate General of Commercial Intelligence and Statistics of India (DGCIS), GoI	Press Information Bureau (PIB)	Ministry of Defense Ministry of Health Ministry of Textile

9. Method of Data Collection

Secondary data has been collected from ITC Trade Map, Directorate General of Commercial Intelligence and Statistics of India (DGCIS) GoI, Centre for Monitoring Indian Economy (CMIE), Press Information Bureau (PIB) and other respective ministries, such as Ministry of Commerce and Industry, Ministry of Defense, Ministry of Health, Ministry of Textile.

10. Trade Balance & Self-reliance Ratio:

Table 1: Trade Balance Values of 3 Industries

| Industry	Pharmaceutical	Textile	Defence	All Products
Year	Trade Balance	Trade Balance	Trade Balance	Trade Balance
2013	1,00,64,105	3,47,80,985	20,53,791	4,68,98,881
2014	1,00,32,172	3,27,46,919	46,78,331	4,74,57,422
2015	1,09,21,530	3,12,87,262	10,36,037	4,32,44,829
2016	1,13,43,388	2,93,44,366	1,41,177	4,08,28,931
2017	1,10,79,900	3,10,02,030	-17,85,942	4,02,95,988
2018	1,22,59,417	2,97,67,952	4,24,399	4,2,451,768
2019	1,37,38,004	2,71,62,147	-33,16,983	3,75,83,168
2020	1,59,49,336	2,41,09,699	-90,576	3,99,68,459
2021	1,61,63,191	2,50,56,187	4,00,690	4,16,20,068
2022	1,70,22,353	2,76,40,005	-20,69,533	4,25,92,825
Average TB in 9 Years	1,18,60,148.6	2,92,89,755	1,47,139.1	4,22,94,233.9
CAGR of TB in 9 Years	0.03%	-0.01%	-0.07%	-0.01%

Source: ITC Trade Map; Unit: Thousand US$
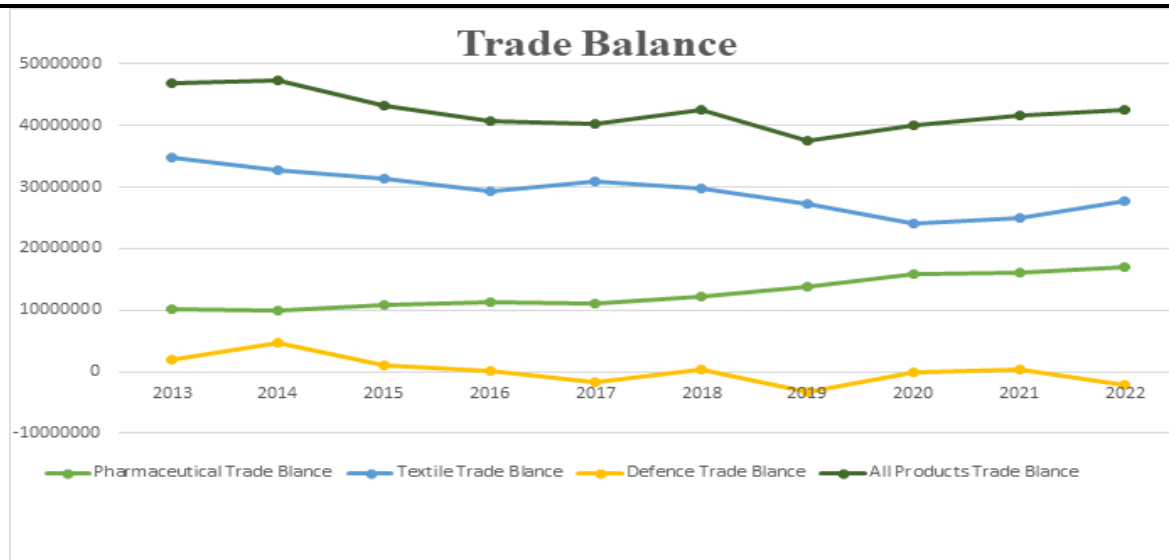
Figure 1: *Trade Balance Values of 3 Industries*

Interpretation: this table shows trade balance of 3 industries during the decade gone by, where textile and pharmaceutical industries have a trade surplus with former's exceeding the latter. Defence has a trade deficit each year after 2016. CAGR of every industry except Pharmaceutical has recorded negative growth. All products have a combined trade surplus, but the negative CAGR shows lack of growth.

Table 2: Self-reliance Ratio Values of 3 Industries

| Industry	Pharmaceutical	Textile	Defence	All Products
Year	SR Ratio	SR Ratio	SR Ratio	SR Ratio
2013	7.03	7.43	1.95	6.07
2014	7.15	6.60	3.22	5.95
2015	7.75	6.34	1.36	5.18
2016	7.68	5.83	1.05	4.80
2017	7.13	5.98	0.57	4.29
2018	6.92	5.05	1.24	4.81
2019	6.44	4.26	0.33	3.38
2020	7.44	5.39	0.94	5.21
2021	5.90	4.10	1.41	4.37
2022	7.23	3.59	0.44	3.49
Average SR in 9 Years	**7.07**	**5.46**	**1.25**	**4.76**
CAGR of SR Ratio in 9Years	**0.28**	**-7.02**	**-13.83**	**-5.38**
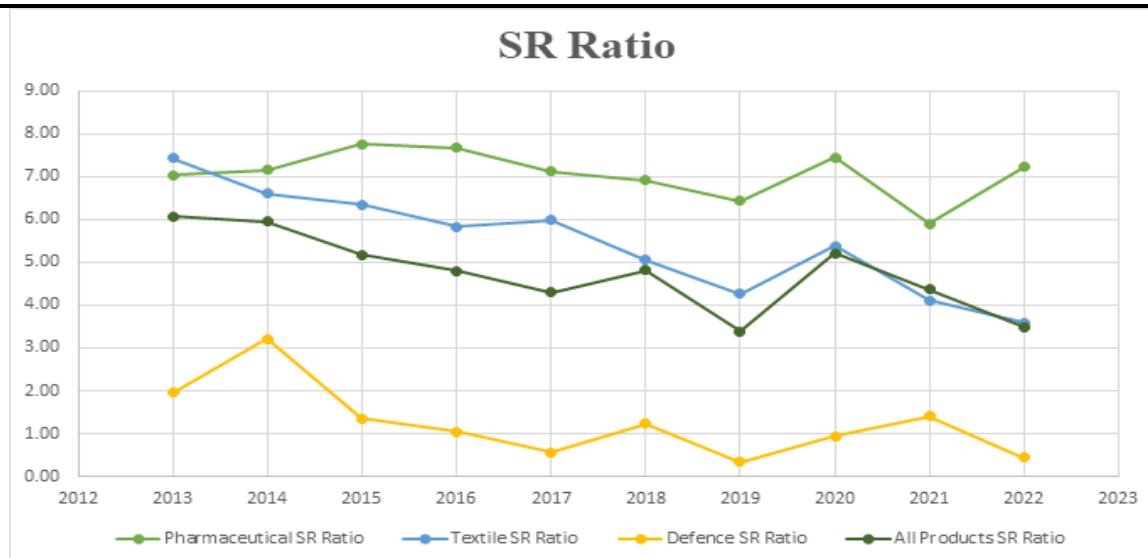
Figure 2: *Self-reliance Ratio Values of 3 Industries*

Interpretation: Having a trade surplus enabled the pharmaceutical and textile industries to have an SR Ratio greater than 5 each year under the scope of this research, registering a value as high as of 7.68. Defence industry on other hand has SR Ratio ranging from less than 1 to 3.22. CAGR of every industry except Pharmaceutical has recorded negative growth. Combined SR Ratio of 3 industries shows a value of 4.76 which is greater than 1, reflecting the self-reliance of the 3 industries. Negative CAGR of all industries together shows fall in self-reliance.

11. Hypothesis Testing:

• Trade Balance and Self-reliance were considered to measure the self-reliance of Pharmaceutical, Textile, and Defence Industries. To test hypothesis following facts have been taken into consideration: TB of both Textile and Pharmaceutical industries was positive for each year from CY13 to CY22, while Defence industry had a trade surplus for 4 out of 10 years.

• Combined TB has been positive for each year from CY13 to CY22.

• Average TB for each of the 3 industries and their combined TB has been positive from CY13 to CY22.

• Combined and individual industry's CAGR of TB has registered a negative growth except for pharmaceutical industry, ranging from -0.7% to +0.3%.

• SR Ratio of both Textile and Pharmaceutical industries was positive for each year from CY13 to CY22, while Defence industry had a ratio value less than '1' for 4 out of 10 years.

• Combined SR Ratio has been positive for each year from CY13 to CY22.

• Average SR Ratio for each of the 3 industries and their combined TB has been greater than '1' from CY13 to CY22.

• Combined and individual industry's CAGR of SR Ratio has registered a negative growth except for pharmaceutical industry, ranging from -
13.83% to +0.28%.

• Average and CY22 values of self-reliance variables reflect self-reliance status of Pharmaceutical and Textile industry. However, the latter has registered an absence of growth in the same.

• Average and CY22 values of self-reliance variables show Defence industry is yet to attain self-reliance.

• Average and CY22 values of self-reliance variables reflect overall self-reliance status of India. However, an absence of growth is registered in the same.

H1: India's Pharmaceutical Industry have become self-reliant after ten years of Making in India: Accepted.

H2: India's Textile Industry have become self-reliant after ten years of Making in India: Accepted.

H3: India's Defence Industry have become self-reliant after ten years of Making in India: Rejected

H4. India's Pharmaceutical, Textile and Defence industries have together become self-reliant after ten years of Making in India: Accepted.

12. Major Findings and Conclusion

Based on an extensive study of Exim data of Pharmaceutical, Textile and Defense industries from Calendar Year 2013-2022 following major findings and conclusion have been made:

- 10 years after Introduction of Make in India initiative the Pharmaceutical and Textile industry have been self-reliant.

- Defence industry was self-reliant in 2021 after recovering from Covid19 but witnessed a negative Trade Balance and an SR Ratio less than 1 in 2022. Hence, it is yet to accomplish self-reliance.

- Since the launch of Make in India, Pharmaceutical industry has witnessed an improvement in its self-reliance status while Textile and Defence industries have shown an absence of growth in their self-reliance status.

- The Pharmaceutical, Textile and Defence Industries have achieved combined self-reliance status in the past decade.

- Last 10 years combined CAGR of Pharmaceutical, Textile and Defence Industries has slowly regressed. Had no pandemic occurred and keeping other factors constant, it would have been different.

- A scope of export value addition was discovered in Pharmaceutical, Textile and Defence Industries in terms of production of new products.

- In the past decade, Government of India have undertaken initiatives to upgrade and modernize manufacturing units; revamp the supply value chain- fixing ceiling prices, launching portals and hosting events; and fostered a Research & Development conducive environment for each of the 3 industries.

13. Contribution to Present Knowledge

Research conducted has thrown light on some new research points contributing to present knowledge. Following insights have been newly discovered which were not found in earlier studies but were discovered in this extensive research:

Two variables: Trade Balance and SR Ratio, have been defined as an absolute and relative measurement of self-reliance of an industry.

- Trade Balance = (Export Revenue – Import Expenditure)

  SR Ratio = (Export Revenue / Import Expenditure)

- Improvement and deterioration of an industry's self-reliance are measured with the CAGR of self-reliance variables, Trade Balance, and SR Ratio.

- Pharmaceutical industry of India is self-reliant with a positive yearly and average Trade Balance, and SR Ratio. The self-reliance of this industry has improved over the past decade.

- Textile industry of India is self-reliant with a positive yearly and average Trade Balance, and SR Ratio. However, the self-reliance of this industry has deteriorated over the past decade.

- Defence industry of India is not self-reliant with a negative yearly and average Trade Balance, and SR Ratio in 4 out of 10 years considered. The self-reliance of this industry has also deteriorated over the past decade.

- Each of these 3 industries, Pharmaceutical, Textile and Defence Industries have shown a scope of export value addition. Thus, fostering the self-reliance of the 3 industries, in terms of their value addition capacity after minimizing or eliminating import dependency.

14. Limitations of the Study:

●   Inter-sector transactions were not accounted for in the study.

●   Global Commodity Price shocks due to war are not accounted for in the study.

●   Volatile and multiple geopolitical and strategic trade and non-trade alignment may have external effect on India's trade.

●   Exports and Imports measured in terms of USD and Price Indexation not performed on value of Exports and Imports.

●   Limited sectors have been studied to assess the Make in India initiative.

●   Exports and Imports were considered only in terms of their value and not in terms of their volume.