

The Critical Analysis of Self Reliance as Indian Foreign Policy: An Economic Perspective

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How to cite this article:

Anubhav Goyal, Megha Goyal. The Critical Analysis of Self Reliance as Indian Foreign Policy: An Economic Perspective. Int J Pol Sci 2024;10(2):131-141.

Abstract

The current destabilising events near India's frontiers, such as the Russia-Ukraine War, one of the worst periods in Pakistan, China's persistent threat to annex Taiwan, the Taliban seizing control of Afghanistan and the world trying to recover from the effects of COVID 19 have made it a mandate for India to be self-reliant from the production of pharmaceuticals, meeting the needs of the nation's agriculture and the requirements for defence for two front wars to start manufacturing export quality electronic products. The most important factors in geopolitics are one's soft and hard power and each country concluding agreements that are in their own best interests through self-sufficiency. So, India developed the "Atmanirbhar Bharat" plan to achieve self-sufficiency, and as a result, the nation is implementing aggressive domestic and external policies to achieve independence in number of industries. Using the soft diplomacy to maximize the benefits from both economies, the nation is attempting to strike a balance in its relations with Russia and the United States. Oil, agricultural fertilizers, defence contracts, and market access are all enjoyed from Russia. Increased soft power, expanded relationship with the west, and a platform for production of technology are all benefits of the USA. Since there will be a high demand for technology in the upcoming years, producing electronic goods at an export-quality level will guarantee an economy driving at a good GDP growth rate, resulting in a strengthening of FOREX reserves, and ultimately preventing the rupee from depreciating significantly against the dollar which makes the following five to ten years crucial for the nation. Based on potential success of sectors such as defence, agriculture, electronics, pharmaceuticals; India may be able to join the global supply chain in that specific industry, allowing for long-term economic growth and development.

Keywords: Self-reliant, Defence, Electronic items, Agricultural products, pharmaceuticals.

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Received on: 05.10.2024 **Accepted on:** 06.12.2024

INTRODUCTION

Entering \$7.5 Billion semiconductor deal with Taiwan will benefit India greatly

This agreement will benefit India considerably because the global semiconductor business is expected to grow at a rapid rate in the next ten years as demand for electronics items continues



to rise. Semiconductors are in high demand as it acts as a motherboard electronic devices such as cell phones, laptops, and wearable devices. Furthermore, automation in different industries, including the automobile industry, semiconductor-based electronic equipment and machinery are demanded. Furthermore, because everyone increasingly relies on electronics to work, the covid era has given a huge boost to the semiconductor business. Some people have developed the habit of working and studying on computers rather on paper. In the next ten years, these forces will propel the semiconductor contract manufacturing sector to new heights.

According to statistics, the semiconductor industry's global market share to reach 95 billion in 2021. The industry grew at a rate of roughly 11.8 percent. It's worth noting that Taiwan will own 65 percent of the global market share in 2021. So, based on the data, we can conclude that Taiwan is the undisputed monarch of the semiconductor business, thanks to its TSMC gem of a corporation. As a result, entering into an agreement with semiconductors will mostly help India, while Taiwan will get a destination to meet unmet demand. As they must be created extremely carefully and uniquely in dust-free rooms, highly skilled and competent individuals must take care of several minute details; this business has a high demand side and a relatively low supply side.

Vedanta, an Indian business, has partnered with Foxconn, a Taiwanese company, to produce semiconductors in India

In the joint venture between the two firms, Vedanta will own most of the share. India's Prime Minister sees a future in which India produces semiconductors and has at least a small share of global semiconductor supply. The companies' joint venture will provide the groundwork for that objective. Our government has granted US \$10 billion in incentives under the Production Linked Incentives (PLI) scheme to lure global corporations to come and operate in India, to support the country's semiconductor ambition. Companies can grow their businesses in India for less under the scheme since they obtain nearly free land, labour services, and long-term tax savings, giving our country an advantage over other competing destinations where they might consider setting up their operations.

(Semiconductor Contract Manufacturing Market 2021-2027, 2021); (Srivastava, 2021); (Kuo, 2021); (Kaur, 2022)

The Quad Alliance unites to preserve semiconductors

India, Japan, the United States, and Australia have formed an alliance to protect crucial supply chains such as semiconductors, to restrict China's growing dominance in these strategic areas. According to geopolitical experts, Quad checks China's Belt and Road plan. It helps India compete with China in the semiconductor area, so that the world's reliance on China for this valuable material for electronics products is reduced.

China accounts for about 5% of worldwide semiconductor supply. Quad wants India to develop some share in global supply in this domain. Given the current scenarios that are being developed, as well as their implications for the future, now is an excellent time for India to seize the chance. The ongoing conflict between Russia and Ukraine has divided the countries, with each opting for a side that best suits their foreign policy objectives. China has been a constant source of assistance to Russia. China's aid to Russia could result in retaliation from the US. The Biden administration may "effectively shut down" Semiconductor Manufacturing International Corporation, as well as any other Chinese firms that continue to supply chips and other advanced technologies to Russia despite US sanctions.

Because it is blessed with firms like Intel, Apple and other mobile manufacturers who employ semiconductors on a large scale, the United States uses a lot of semiconductors made around the world. As a result, the United States can shut down China's semiconductor industry. As a strategic partner, Russia is extremely vital to China, so it can be a huge opening for India to grow its roots and solidify them in semiconductors industry.

India can become 'Pharmacy of the World', according to an economic survey done in 2021

According to the report, India's \$41 billion pharmaceutical business is predicted to rise to \$65 billion by 2024 and \$120-130 billion by 2030. Our pharmaceutical sector has seen a continuous growth over a period. The growth graph is always upward moving.

Outside of the United States, India is the only country with more than 262 US-FDA approved pharma plants (including APIs). With current state-of-the-art technology, we have almost 1400 WHO-GMP approved Pharma Facilities and 253 European Directorate of Quality Medicines (EDQM) accredited

plants. No other country has such a well-developed infrastructure. The infrastructure mentioned are the places where the raw material for the medicines is made. We possess great infrastructure facilities in terms of both manufacturing raw material and then preparing final product. Still work must be done on preparation of raw material.

We are also constantly enjoying rising foreign direct inflow in our Pharma sector as world knows we have the power to be the 'Pharmacy of the World'. The world is showing faith on our pharma sector and Covid has a huge impact to play in this as India emerged as vaccine manufacturer country for itself and others. We were the fastest who gave 100 crore doses to its population and in the time span we aided many other countries, primarily including the ones in Asia with crores of vaccines.

The Quad group decided to help the world tackle the pandemic by producing vaccines in bulk quantities where India emerged as main vaccine producing centre. India has committed to supply 5 billion doses of COVID-19 vaccine to the rest of the world by 2022 promised by the central government. We also tied with other vaccine manufacturers such as Johnson & Johnson as we possess great art to produce vaccine. Boris Johnson, the Prime Minister of the United Kingdom, also took a made in India vaccination which indicates our growing stature in the business.

(India's Biological E aims to produce 60 crore doses of Johnson & Johnson covid vaccine a year, 2021); (Yadav, 2021); (India P. T., 2021); (Singh, 2021); (India G. o.); (CR Sukumar, 2021); (Viswanath Pilla, 2021)

According to industry insiders, India's API push will bear fruits in three to five years

The government's production linked incentive (PLI) scheme, which aims to promote API (active pharmaceutical ingredients) manufacturing in India, has time to yield results. First, most of the time is consumed to finalise the awardees for PLI scheme and after that companies also take a period to set up their facilities. The APIs are the key ingredients for manufacturing of medicines, and this is the reason the infrastructures set up for manufacturing APIs takes a lot of time for setting up their operations. No compromise is being made in any of the area like quality, cleanliness etc. of the unit. Many formalities and terms and conditions are to be fulfilled to set up such a unit making it a long-time taking process.

In 2021 India-China trade has seen a boom

and the numbers are sky rocketing. India had imported a large chunk from China. The imports saw approximately 46 percent spike from China as compared to previous year. One of the main reasons behind such a rise in number is due to the current APIs infrastructure China is boasting. China currently supplies India with a large portion of India's medication intermediates, key starting materials (KSMs), and active pharmaceutical ingredients (APIs). We have worked on building the infrastructure but as it will take time to bear some sweet fruits, in the wake of pandemic China has stolen the show.

For the setup of manufacturing sites of APIs, U.S. food and drug administration distributes its certificates to countries to set up such facilities along with compliant terms and qualities to be met. After that a checkup of the unit is arranged to see whether the unit will be able to deliver the standards and after that the manufacturing of APIs is allowed to the unit.

It is due to our negligence that benefits will be reaped by China for at least next three to five years until we don't strengthen our whole 'Make in India' initiative for pharma sector. Even after having infrastructure, relations to build on we failed disastrously whereas China even after getting much less attention from U.S., from its limited resources and infrastructure, hold the opportunity and revealed from the numbers how well it has managed its dominance in the sector.

The government is encouraging 'Make in India' defence manufacturing

The defence ministry has decided to cancel tenders for purchase of helicopters and shortrange surface-to-air missiles. The Ministry of Defence has begun scrutinizing import deals that fall under the Buy Global category and are entirely purchased from overseas vendors. Imports of approx. 351 defence items will be prohibited beginning in December 2022. It is part of the government's wider goal of making India a military platform and equipment production base.

According to the reports India will spend a staggering USD 130 billion to modernize its armed forces and improve their fighting capabilities against regional competitors. Official sources stated the strategy includes purchasing a variety of weapons, missiles, air defence systems, fighter jets, submarines, and warships, as well as drones, surveillance technology, and establishing infrastructure for widespread artificial intelligence

use. Now there is a strong likelihood that most of the chunk of \$130 billion will be invested in India, which would be a wonderful gesture by the government. The government is taking a bold step and is showcasing a lot of trust in domestic manufacturing of defence products.

(Janet Woodcock, 2019); (Manudhane & Hedge, 2021); (ANI, 2022); (PTI, India to spend a whopping USD 130 billion to modernise forces, 2019); (India P. T., 2022)

India and Russia had talked about collaborating on defence initiatives in Central Asia

India and Russia are said to have spoken about collaborating on defence projects in Central Asian countries including Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. The main competitor both the countries will be facing in the region is China. This is the area where we can tap, as the region has tremendous potential to respond in terms of revenue and emerge as a rising market and collaboration with Russia can be a master stroke in this region.

Russia had been dominating the region from past 30 years but from past 6 to 7 years it is facing a stiff competition from China. China provides substitutes of Russian weapons at a cheaper price. This is the reason Russia also wants India's help in rebuilding its dominance in the region which will be a win-win situation for both the parties.

Russia is benefitted in terms of sanctions imposed by Western World it had faced whenever dealing in defence items. Solution to this is to partner and enter in a Joint Venture with India where India will be holding the majority stake. In response we will receive technology, high tech weapons and manufacturing experience of the one of the giants of the defence industry. The same case as it has been done by both countries in BrahMos Aerospace.

The defence partnership between India and Russia has already seen a growth as two came together for a joint venture in BrahMos Aerospace. It is a joint venture between India's Defence Research and Development Organization (DRDO) and Russia's the Joint Stock Military Consortium "NPO Mashinostroyeniya." According to reports it includes 50.5 percent from the Indian side and 49.5 percent from the Russian side. With the active cooperation of a coalition of Indian and Russian companies, the corporation is responsible for designing, developing, producing, and marketing the BRAHMOS supersonic cruise missile.

The missile was a great success as it has high speed, comes under super sonic category and the precision to hit the target which reflects the accuracy is also very high. According to the reports Thailand, Vietnam, Singapore, Indonesia, and Malaysia are among the ASEAN nations that have contacted India to learn more about the missile and includes the possibilities of export. Countries from the Middle East (UAE, Qatar, and Saudi Arabia); South America (Brazil, Argentina, and Chile); Eastern Europe (Bulgaria); and South Africa, Egypt, and South Korea are also being discussed. Now, they have even signed their first deal as Philippines' navy will receive the BrahMos anti-ship missile system.

(ANI, 2022); (India P. T., 2022); (PTI, India to spend a whopping USD 130 billion to modernize forces, 2019); (Team, 2022); (Desk, 2021)

Private defence manufacturing companies in SIPRI Report

According to SIPRI, the world's leading arms-producing and military-services businesses sold \$531 billion in combined arms sales. United States hold the largest share equal to 54% of total worldwide share of \$531 billion. In the report in the top 100 companies there were 3 Indian companies namely Hindustan Aeronautics (HAL), Bharat Electronics (BEL), and Indian Ordnance Factories. Among the 3 HAL and BEL showed growth as compared to 2019 stats. Indian Ordnance factory was a total government outlet and was proving to be a slow company because of which now it has been broken down into 7 individual units which will now operate on their own. Guidance will still be given to them by government but now they can operate solely as private unit as the case is with HAL. Government still holds close to 90% shares of HAL. Indian ordinance factory was not able to meet the targets decided, was consuming lot of resources, lot of time was being wasted in delivery of announcements. So, need to let the units work on their own was there as like the same was did by China many years before and now ranks the second enjoying a great share of total arms sales worldwide. If the work will be done properly now by new units as it proved to be positive in case of HAL, India will see a drastic spike in its arms share worldwide in a few upcoming years and will earn lot of revenue from defence industry itself.

(Marksteiner, Béraud-Sudreau, Tian, Silva, & Kuimova, 2021); (Rane, About BrahMos, 2022); (Rane, Media; Bulletin, 2022); (Bharati, 2022)

In FY22, agricultural exports increased to record \$50 billion

Despite logistical obstacles caused by the COVID-19 epidemic, India’s agricultural exports increased by roughly 20% to \$50.21 billion in 2021-22, according to the Commerce and Industry Ministry. Bangladesh, the United Arab Emirates, Vietnam, the United States, Nepal, Malaysia, Saudi Arabia, Indonesia, Iran, and Egypt are among the top export destinations. One of the main steps taken by the government behind rising of agricultural exports to record levels is signing of Free trade agreement with UAE and drastic changes in world scenario.

After 15 years, India has surpassed Brazil as the top food provider to Arab countries. Arab nation is a big group of approx. 22 countries. Last year, Brazil imported 8.15 percent of the total agriculture products imported by the 22 League members, whereas India imported 8.25 percent, putting an end to Brazil’s 15-year lead. This has mainly been due to pandemic. The recovering of pandemic in Brazil is at a slow pace and they were not able to handle the pandemic judiciously disrupting their supply chain. This provides an opportunity to our country to export agricultural products to Arab nations and we grabbed it with both hands.

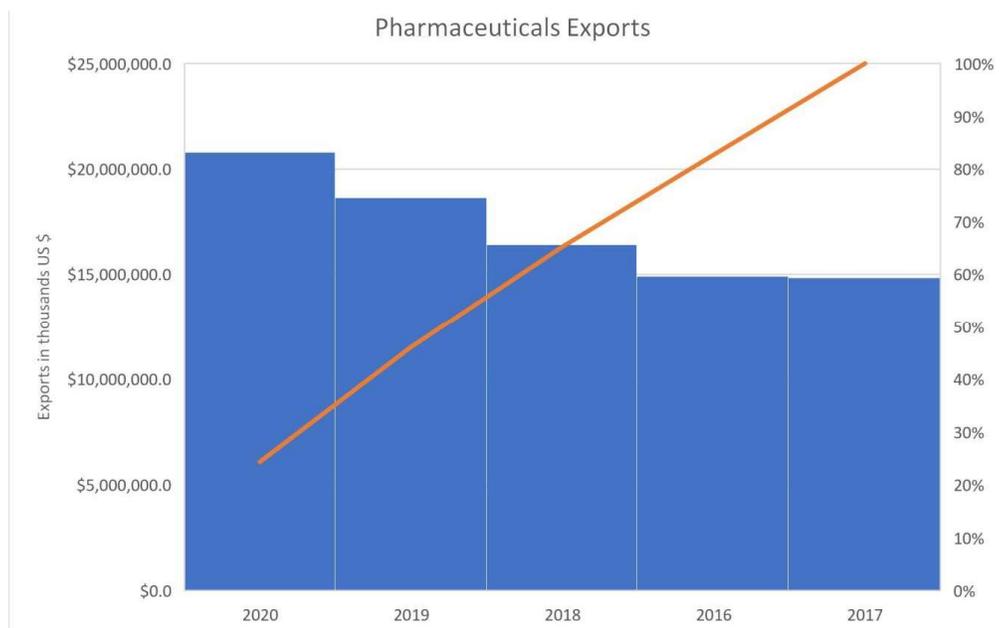
Although the Arab world is one of Brazil’s most important trading partners, the country’s remoteness from those markets paid a toll as the pandemic wreaked havoc on global logistics. This is now our duty that the title we have claimed

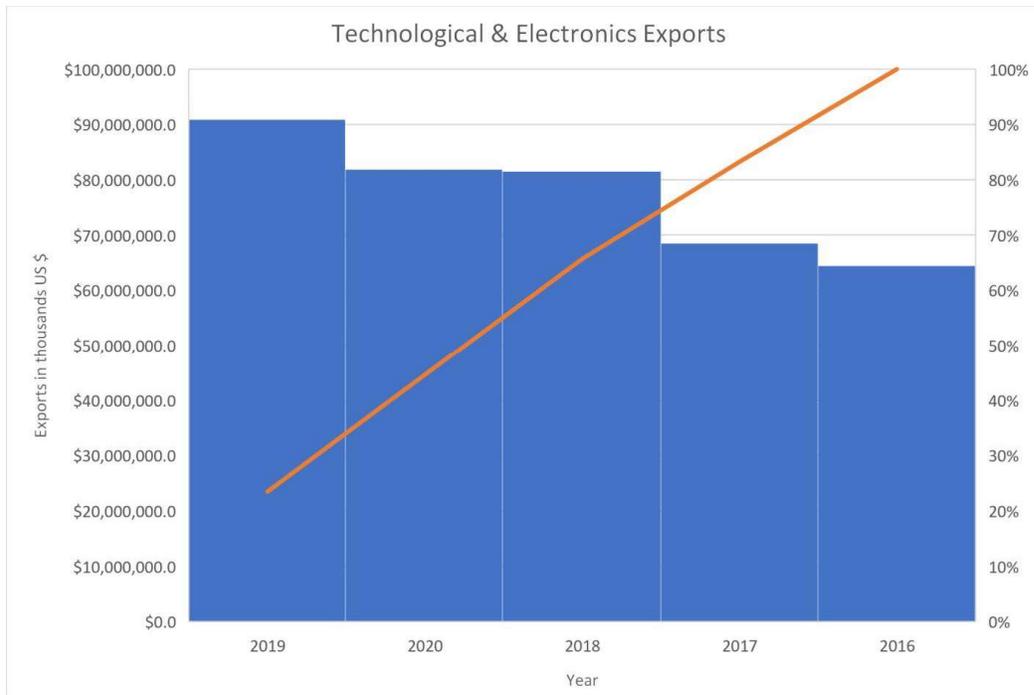
as the highest exports of Agri products to Arab world should be reclaimed by us. The creamy layer of Arab world lies in the nations neighbour to UAE including UAE. From this region if we go by distance, India is much closer as compared to Brazil. So, it will be much cheaper for India in form of logistics cost to export something in these countries. This is the reason as well that India should dominate the region when compared with Brazil.

This shows that entering in FTA with a country with important location not only helps to increase trade with that country, but also open trading opportunities with the countries nearby. When we export Agri products to Arab world, all the exports are done through UAE. Due to FTA the charges on all the products are very low when they enter and exit UAE. This gives cost advantage to our Agri products as well. After Bangladesh, the UAE is India’s second-largest agricultural commodity export destination.

India’s comprehensive economic cooperation agreement (CEPA) with the United Arab Emirates provides food exporters in the Western Asian country a competitive edge on competitors from Brazil, Australia, and Pakistan. According to reports, the Agri products which were seeing a downfall in exports to UAE around 2018 and 2019 have started to rise after the free trade agreement. The exports started to reclaim and get above the previous levels of exports in the financial year 2021-22.

(Reuteurs, 2021); (PTI, Agri exports spurt by 20% to \$50 billion in FY22, 2022); (Das, 2022); (UNCTAD)





FINDINGS AND DISCUSSION

It has been assumed that pharmaceuticals total exports will include Medicinal and pharmaceutical products, Instruments & appliances, for medical, etc. Since semiconductor is a high technological, electronic driven product, under its export's high technology manufactures: electronic and electrical and high-skill and technology-intensive manufactures are included. Under total agricultural products exports, some of the top agricultural export products are included such as rice, spices, cotton, sugar, sugar preparations and honey, meat of bovine animals, fresh, chilled, or frozen and meal and flour of wheat and flour of meslin. (As per Economic survey 2021-22 these are some of the top agricultural export products). The total merchandise exports shown exclude military goods, fissionable materials, bunkers, ships, and aircraft.

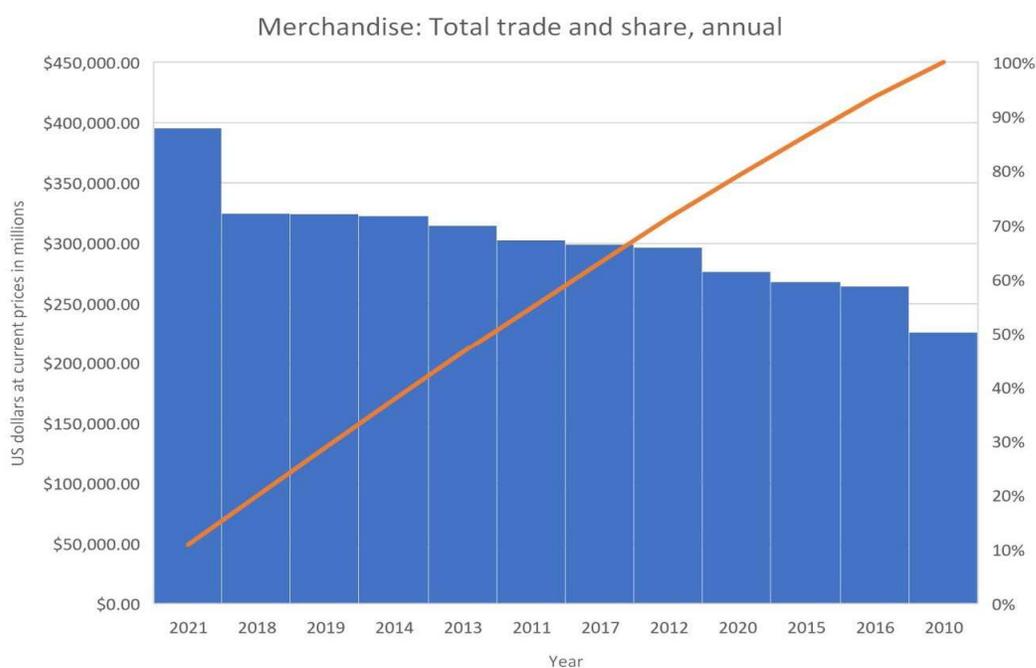
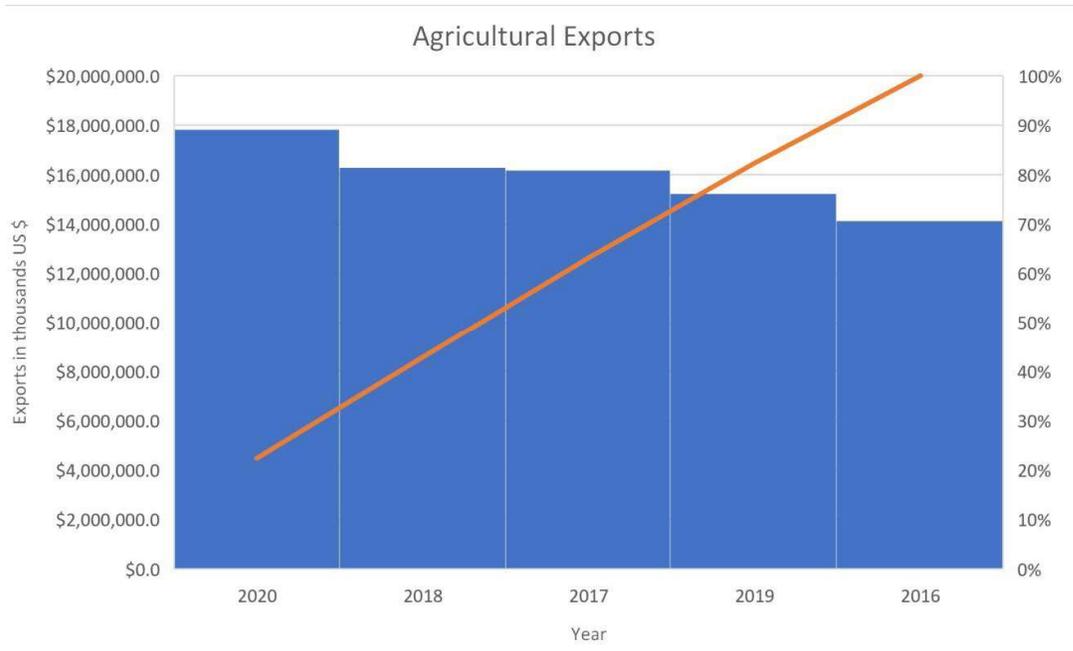
We have been emerging as the Pharma hub as our private companies have stood in this industry and whenever our private sector gets a hold of some industry, we as a country always outshine others on global stage in that industry as our private sector has tremendous growth and work culture. Our pharma exports have continuously been rising and Covid has a huge role to play in this as the world looked at us to supply vaccines and medicines. We still have time to be self-reliant in this sector as our

APIs workings are still going on. Once we will have the proper infrastructure developed, which is five to eight years down the line we will proudly say that till 2030, our pharma sector is humongous. When our APIs infrastructure will be developed, we will see there will a drop in imports from China and rise in exports worldwide in pharma sector, APIs which are raw materials and total merchandise exports as well. We have great potential, and the world also believes in us. Russia has already given the statement that it is very confident that India will easily replace western countries in field of pharmaceuticals after they have left Russia because of sanctions. We have everything to be the best in pharma sector we just need to act proactively and there lies many good days ahead.

The semiconductor is a keen industry at present for our country where we must build our dominance. As the world scenarios are changing drastically, some of the developed nations including China and US will start working for the future which is robotics. It implies that their attention on semiconductor industry will decline. We have already come in contracts where we are learning to build these semiconductors. Once we master this art, it will be just over night that our semiconductor exports will see a huge jump and will add to the total exports to rise at a great speed. It is true that robotics will be the future, but it will be for the developed nations. For underdeveloped and developing nations, they will still be needing semiconductors for a long time

and India must quench their thirst as we have the desired infrastructure as well as skilled people to undertake the task. Also, the worldwide scenarios and diplomatic relations favour us as US may destroy China's semiconductor industry as it has some companies which are the biggest buyers of semiconductor chips. Moreover, China threatening that it may attack Taiwan which is the god father of semiconductor industry makes it more important for India to step up in this field, be self-reliant at first and after that be ready to supply semiconductors

at a huge scale to the globe as electronics industry must move forward worldwide and only then the progress will be made. Once we will develop 'made in India' semiconductors, the chances are very high that our chips will be the most demanded ones which can aggressively push our exports in technological and electronics industry high which will eventually be added to our total Merchandise exports. In this sector as well if we will utilise the resources to the fullest then we can easily register double digit growth.



The major sector in our country which employs most of our population is the agricultural sector. Whenever our country will do something better, this sector must stand up and show growth trajectory. Our agricultural exports from some past periods are rising continuously which results in rise in total merchandise exports. This is an area where growth prospects for us are unlimited. Recently due to the disturbing world scenarios, now more than revenue this sector is more of a responsibility for us as we must feed the world. Russia and Ukraine were among top Agri product exports countries. Now as their conditions are well known by everyone, it is only India as a country which can save millions of people dying of hunger. Everyone including Russia is looking towards India to fulfil their stores with food. This can also be seen as an opportunity by India to make everyone dependent on us for their diet needs. One major edge we lack is that we don't have our own made in India brand which sells packaged food items. If we can do something in this regard, then it will be just matter of time that our agricultural exports will be touching a record number of \$150 billion as packaged items can be stored for longer times in stores, can be displayed at malls for direct purchase by the buyers. Through this we can make their meals dependent on our brand. This is the untapped sector and till then also at present we have opportunity to grow this total agricultural trade in double digits.

The current histograms depict rise in exports of pharmaceuticals, merchandise exports, agricultural products. The semiconductor industry will take some time to show the results as we have not yet started the manufacturing and just signed the deal. With time as we will start manufacturing, the industry exports will be sky rocketing.

The defence sector is emerging to be the key for our country. In this area it is our utmost responsibility to be self-reliant. We are facing a lot of turbulence from our neighbouring countries and the tensions will only continue to rise. As we will grow our stature, we will constantly face pressure from China on our Eastern front. Pakistan is going through its worst phase in terms of politics, unrest among people. In the future as well, it may be possible that it remains to be a disturbed nation which may constantly try to harm us. In the South Sri Lanka is almost bankrupt and as it has taken huge numbers of loans from China, it is possible that it fails under China's debt trap and after which China will repeat its habit of taking some land of the place and building its military base. Afghanistan is now a dead place controlled and ruled by terrorists, so we must always be prepared for any worst case. Due to unpredictable world scenes, it is best that we as a country are self-reliant for our

defence as dependency of even a small item like a spare part can cost something big. Self-reliance in defence is the riskiest decision taken as it takes lot of faith and courage to trust our local companies and give them contracts of manufacturing defence equipment as they are not tested and neither do, they possess great working experience in this sector. But with the span of time, once we are self-reliant in this field, it will be one of the biggest feats achieved through Self-reliant India. Our defence equipments once developed will also receive huge orders as a replacement for expensive ones and can also serve as trustworthy weapons. We also enjoy an edge of giving line of credit to small countries as we are a big economy with huge budget. This will also result in increasing our soft power and strengthening of diplomatic ties with other countries. To gain more experience in the sector we can tie up with Israel, our most trusted partner and bulk of experience in the sector. It also faces same concerns of neighbouring countries continuously poking in internal affairs and engaging in small dirty attacks. Once our local companies will step up in this field, we will witness our rising stature not only in revenue terms but also in diplomatic terms.

CONCLUSION

The four sectors mentioned in the paper are currently having either the golden opportunities to grab as to tap the untapped resources or are the need to be done currently. We are witnessing transformation of a phase where our country is rising in every possible aspect, the need is to fully capitalize on unlimited opportunities and making our India an integral part of global supply chain. Self-reliant India in total has been a boon as we have achieved some record numbers and as all these sectors will rise, ultimately our merchandise exports will also rise as seen in the latest year figures. At present we are just solidifying the future 8 to 10 years path for us and if we can maintain equilibrium and work on the fullest capacity holding right opportunity at right time in terms of either getting and working on foreign direct investments (FDIs) projects or getting in FTAs, then we will run with a booster speed on the path created by us.

REFERENCES

1. ANI. (2022, January). Modi govt scraps missile, chopper tenders to push 'Make in India'.

- The Times of India. Retrieved from <https://timesofindia.indiatimes.com/india/modi-govt-scraps-missilechopper-tenders-to-push-make-in-india/articleshow/88904821.cms>
2. Apple's Exports From India At Rs 10,000 Crore: Record For Any Company In 1st Yr Of PLI! (2022, March). Trak.in. Retrieved from <https://trak.in/tags/business/2022/03/22/apples-exports-from-india-at-rs-10000-crore-record-for-any-company-in-1st-yr-of-pli/#:~:text=To%2520establish%2520a%2520strong%2520presence,the%2520production%2520inked%2520incentive%2520scheme>
 4. Aryan, A. (2021, December). Intel looking at semiconductor plant in India. New Delhi: The Indian EXPRESS. Retrieved from <https://indianexpress.com/article/technology/tech-newstechnology/intel-looking-at-semiconductor-plant-in-india-7695429/>
 5. Bharati, P. (2022, April). Make-in-India for the world: Philippines to get BrahMos Anti-Ship Missile System for its navy. NewsOnAIR. Retrieved from <https://newsonair.com/2022/01/14/make-in-india-for-the-world-philippines-to-get-brahmos-anti-ship-missile-system-for-its-navy/>
 6. CR Sukumar, E. B. (2021, April). India urges China to clear bottlenecks on key pharma raw-material. The Economic Times. Retrieved from <https://economictimes.indiatimes.com/industry/healthcare/biotech/pharmaceuticals/india-urges-china-to-clear-bottlenecks-on-key-pharma-raw-material/articleshow/82308731.cms?from=mdr>
 7. Cutress, D. I. (2021, July). Intel's Process Roadmap to 2025: with 4nm, 3nm, 20A and 18A?! Anandtech. Retrieved from <https://www.anandtech.com/show/16823/intel-accelerated-offensive-process-roadmap-updates-to-10nm-7nm-4nm-3nm-20a-18a-packaging-foundry-emib-foveros>
 8. Das, S. (2022, February). Comprehensive Economic Partnership Agreement: Trade pact with UAE seen to boost exports of agri products. Financial Express. Retrieved from <https://www.financialexpress.com/economy/comprehensive-economic-partnership-agreement-trade-pact-with-uae-seen-to-boost-exports-of-agri-products/2442027/>
 10. Desk, W. (2021, December). Does Russia see role for India in maintaining Central Asia's Soviet-era weapons? The Week. Retrieved from <https://www.theweek.in/news/world/2021/12/30/does-russia-see-role-for-india-in-maintaining-central-asias-soviet-era-weapons.html>
 11. Dutta, A. (2022, January). Apple India may cross Rs 30,000 crore revenue in FY2022. Business Today. In. Retrieved from <https://www.businesstoday.in/latest/corporate/story/apple-india-may-cross-rs30000-crore-revenue-in-fy2022-319214-2022-01-15>
 12. Gartner. (2022, February). Top 10 semiconductor buyers in 2021. telecomlead. Retrieved from <https://www.telecomlead.com/telecom-chips/top-10-semiconductor-buyers-in-2021-103286>
 13. Graham, L., Brown, D. D., Salzer, C., Szabo, A., & Vlachopoulos, D. (2021). *Global Manufacturing Risk Index 2021*. Cushman & Wakefield. Retrieved from <https://cw-gblgws-prod.azureedge.net/-/media/cw/global/insights/research/2021/2021-manufacturing-risk-index.pdf?rev=9a9b2afcb5ae466884c5c668d9fb88b3>
 14. IANS. (2022, January). Apple, Samsung give \$5-bn thrust to India's local manufacturing scheme. Business Standard. Retrieved from https://www.business-standard.com/article/companies/applesamsung-give-5-bn-thrust-to-india-s-local-manufacturing-scheme-122011801205_1.html#:~:text=As%2520India%2520renews%2520its%2520thrust,the%2520financial%2520year%25202021%2520D22
 15. India, G. o. (n.d.). Economic Survey 2021-22. Department of Economic Affairs. Retrieved from <https://www.indiabudget.gov.in/economicsurvey/doc/echapter.pdf>
 17. India, P. T. (2021, April). Indian pharma exports grow at 18% to \$24.44 billion in FY 21 from \$20.58 bn. Business Standard. Retrieved from https://www.business-standard.com/article/companies/indian-pharma-exports-grow-at-18-to-24-44-billion-in-fy-21-from-20-58-bn-121041700237_1.html
 18. India, P. T. (2022, December). 351 Defence Items Banned For Import Starting December 2022. NDTV. Retrieved from <https://www.ndtv.com/india-news/351-defence-items-banned-for-import-starting-december-2022-2677857>
 19. India's Biological E aims to produce 60 crore doses of Johnson & Johnson covid vaccine a year. (2021, February). Mint. Retrieved from <https://www.livemint.com/science/health/indias-biological-e-aims-to-produce-60-crore-doses-of-j-j-s-covid-vaccine-a-year-11612936996025.html>
 20. Intel. (n.d.). Wikipedia, The Free Encyclopedia. Retrieved from <https://en.wikipedia.org/wiki/Intel>
 21. Janet Woodcock, M. (2019, October). Safeguarding Pharmaceutical Supply Chains in a Global Economy. Retrieved from <https://www.fda.gov/news-events/congressional-testimony/safeguarding-pharmaceutical-supply-chains-global-economy-10302019>
 22. Kaur, D. (2022, February). Foxconn, Vedanta join hands to manufacture semiconductors in India. Techwire, ASIA. Retrieved from <https://techwireasia.com/2022/02/foxconn-vedanta-join-hands-to-manufacture-semiconductors-in-india/>
 23. Krishnan, R. (2021, September). Quad alliance joins hands to secure semiconductor, 5G tech supply chains. The Economic Times. Retrieved from <https://economictimes.indiatimes.com/news/india/quad-alliance-joins-hands-to-secure-semiconductor-5g-tech-supply-chains/articleshow/86522479.cms>
 24. Kuo, S. (2021, March). Progress in Importation of US Equipment Disperses Doubts on SMIC's

- Capacity Expansion for Mature Nodes for Now, Says TrendForce. Retrieved from <https://www.trendforce.com/presscenter/news/20210305-10693.html> Largest Companies by Market Cap. (n.d.). Global Ranking. Retrieved from <https://companiesmarketcap.com/>
24. Manudhane, T., & Hedge, B. (2021). *Solara Active Pharma Sciences*. Motilal Oswal. Retrieved from https://bsmedia.business-standard.com/_media/bs/data/market-reports/equitybrokertips/2021-05/16206352570.28546800.pdf
 25. Marksteiner, A., Béraud-Sudreau, L., Tian, N., Silva, D. L., & Kuimova, A. (2021). *The Sipri Top 100 Arms-Producing And Military Services Companies, 2020*. Sipri Fact Sheet. Retrieved from https://sipri.org/sites/default/files/2021-12/fs_2112_top_100_2020.pdf
 26. Mishra, R. D. (2022, April). India's exports hit a record high of \$418 billion in 2021-22. Mint. Retrieved from <https://www.livemint.com/economy/indias-merchandise-exports-reach-417-8-billion-infy22-11648996216510.html>
 27. Moorthy, S. (2021, November). Apple supports 1 million jobs in India, investing significantly to grow operations: VP. Money Control. Retrieved from <https://www.moneycontrol.com/news/business/apple-supports-1-million-jobs-in-india-investingsignificantly-to-grow-operations-vp-7735351.html>
 28. PTI. (2019, December). Chinese city turns into ghost town after Samsung shifts operation to India, Vietnam. The Economic Times. Retrieved from <https://economictimes.indiatimes.com/tech/hardware/chinese-city-turns-into-ghost-town-aftersamsung-shifts-operation-to-india-vietnam/articleshow/72477142.cms>
 29. PTI. (2019, September). India to spend a whopping USD 130 billion to modernise forces. The Economic Times. Retrieved from <https://economictimes.indiatimes.com/news/defence/india-to-spend-a-whopping-usd-130-billion-for-military-modernisation-in-next-5-7-years/articleshow/71053542.cms?from=mdr>
 30. PTI. (2021, June). Samsung completes shifting of display manufacturing unit from China to UP's Noida. Financial Express. Retrieved from <https://www.financialexpress.com/industry/samsung-completes-shifting-of-display-manufacturing-unit-from-china-to-ups-noida/2275115/>
 31. PTI. (2022, April). Agri exports spurt by 20% to \$50 billion in FY22. The Economic Times. Retrieved from <https://economictimes.indiatimes.com/small-biz/trade/exports/insights/agri-exports-spurt-by-20-to-50-billion-in-fy22/articleshow/90756719.cms>
 32. Rane, S. A. (2022). *About BrahMos*. Retrieved from BrahMos Aerospace: <https://brahmos.com/content.php?id=1>
 33. Rane, S. A. (2022). *Media; Bulletin*. Retrieved from BrahMos Aerospace: <https://brahmos.com/pressRelease.php?id=99>
 34. Ranjan, R. (2021, August). India Beats US To Emerge As World's Second Most Desirable Manufacturing Hub: Report. Republicworld.com. Retrieved from <https://www.republicworld.com/indianews/general-news/india-beats-us-to-emerge-as-worlds-second-most-desirable-manufacturinghub-report.html>
 35. Reuters. (2021, December). India surpasses Brazil as No.1 food supplier to Arab nations after 15 years. BusinessToday.In. Retrieved from <https://www.businesstoday.in/latest/economy/story/indiasurpasses-brazil-as-no1-food-supplier-to-arab-nations-after-15-years-314745-2021-12-07>
 36. Samsung to invest Rs 4,825 cr in India; to move display production unit from China. (2020, December). BusinessToday.In. Retrieved from <https://www.businesstoday.in/latest/economy-politics/story/samsung-to-invest-rs-4825-cr-in-india-to-move-display-production-unit-from-china281356-2020-12-12>
 37. Semiconductor Contract Manufacturing Market 2021-2027. (2021, June). *Research And Markets*. Orion Market Research Private Limited. Retrieved from <https://www.researchandmarkets.com/reports/5406803/semiconductor-contract-manufacturingmarket-2021>.
 38. Singh, S. (2021, January). Economic Survey 2021: India has potential to become 'pharmacy of the world'. MoneyControl. Retrieved from <https://www.moneycontrol.com/news/business/economicsurvey-2021-india-has-potential-to-become-pharmacy-of-the-world-6415631.html>
 39. Srivastava, S. (2021, September). India accelerates talks with Taiwan on \$7.5-billion chip plant, trade deal. The Economic Times. Retrieved from <https://economictimes.indiatimes.com/news/economy/policy/india-accelerates-talks-with-taiwanon-7-5-billion-chip-plant-trade-deal/articleshow/86549579.cms>
 40. Swanson, A. (2022, March). Chinese companies that aid Russia could face U.S. repercussions, commerce secretary warns. The New York Times. Retrieved from <https://www.nytimes.com/2022/03/08/technology/chinese-companies-russia-semiconductors.html>
 41. Team, D. (2022, February). Here's why India cancelled plans to buy 30 Predator drones from the US. DNA. Retrieved from <https://www.dnaindia.com/india/report-here-is-why-india-cancelled-plansto-buy-30-predator-drones-from-the-us-modi-government-ban-acquisition-uavs-2935713>
 42. UNCTAD. (n.d.). *United Nations Conference on Trade and Development STAT*. United Nations Conference on Trade and Development. Retrieved from <https://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx>
 43. V, V. V. (2021, October). India Beats All G7 Nations To Record Highest Growth In Merchandise Exports

- In 1.5 Years. Republicworld.com. Retrieved from <https://www.republicworld.com/india-news/economy/india-beats-all-g7-nations-to-record-highest-growth-in-merchandise-exports-in-1-dot-5-years.html>
44. Viswanath Pilla, E. B. (2021, November). Committed to supply 5 billion COVID vaccines doses to world by 2022: Govt. The Economic Times. Retrieved from <https://economictimes.indiatimes.com/news/india/committed-to-supply-5-billion-covid-vaccines-doses-to-world-by-2022-govt/articleshow/87785302.cms?from=mdr>
45. Yadav, M. (2021, December). India's API push to fructify in three to five years, says MD at Windlas Biotech. BusinessLine. Retrieved from <https://www.thehindubusinessline.com/companies/indiasapi-push-to-fructify-soon/article38023294.ece>

