



Accelerating Digital Atmanirbhar

Report on remedial steps required for making India
the World's capital in optical fibre manufacturing

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27th March 2023

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1 Purpose

The purpose of this report is to enumerate the challenges faced by Indian optical fibre/optical fibre cable industry from foreign companies selling products in India at costs lower than the costs in their domestic markets, thereby injuring an otherwise competitive Indian industry and restricting the domestic industry from accessing the domestic market.

2 Background

Digitisation promises significant economic benefits, and Indian initiatives such as BharatNet saturation project are aimed at reaping the gains by speeding up and expanding the process of digital inclusivity.

At the core of this rapid digital expansion is India's broadband infrastructure.

As broadband services expand, optical fibre cable networks – made from optical fibre - are being expeditiously rolled out to ensure that India is hyper-connected and remains at the forefront of digital advancements being made across the world.

Optical fibres, for all practical purposes, provide the backbone to the broadband infrastructure that is powering India's digital transformation.

Optical fibre forms the core of India's ambitious project of connecting everyone and everything, thereby transforming India into an efficient digitalized economy, bringing prosperity to all.

The optical fibre/optical fibre cable industry already employs around 20,000 people and this number is set to increase rapidly, given the capacity additions planned by Indian manufacturers in the near future. Further, it impacts over 1 lakh people, spread across manufacturing, deployment, and maintenance.

More importantly, India has the potential to become the **optical fibre capital of the world**.

It already has a manufacturing capacity that far outstrips the domestic consumption. Against domestic requirement of around 26 million fibre km, the country's manufacturing capacity is already around 90 million fibre Km (Mn FKM).

List of Indian manufacturers with their respective capacities are as below:

Name of the Company	Optical Fibre (Production Capacity)
Sterlite Technologies Limited	38 Mn FKM
Birla	12 Mn FKM
Aksh	3 Mn FKM
HFCL	12 Mn FKM
Finolex	3 Mn FKM

ZTT	6 Mn FKM
Hengtong	6 Mn FKM
Corning	16 Mn FKM

It means India can become a major exporter of optical fibre and optical fibre cable.

However, the continuous selling of products by foreign companies at costs lower than that in their respective domestic markets, is causing significant ‘injuries’ to the Indian industry. Though competitive with products adhering to global standards, Indian manufacturers are being adversely impacted in absence of a level playing field.

Alongside imports causing injury, there are several more factors adversely impacting the Indian industry.

The issues currently faced by Indian manufacturers can be categorised as below:

- **Largescale imports of optical fibre and optical fibre cable** mostly of dubious quality but at extremely low prices from China
- **Rampant violation of the Public Procurement - Preference to Make in India Policy (PPP-MII) of 2017** that aimed to boost local products by preferring local suppliers in all procurement. The continuing violations are threatening to paralyse the Indian industry, which under normal circumstances should have thrived
- Continuing **Import of Preform** which significantly contributes to the manufacture of optical fibre/optical fibre cable
- Urgent need for a **High and New Technology Enterprise (HNTE) programme** which can incentivise domestic manufacturers
- The need to rationalise **Right of Way (ROW) policy** that is crucial for optical fibre cable network roll out

This report elaborates on the issues and enables us to understand how addressing them can accelerate the growth of Indian optical fibre/optical fibre cable industry into a Champion.

3 Issue 1: The Undesirable Impact of Imports from China

Due to the adverse geopolitical situation of China post COVID, Chinese manufacturers have found it challenging to export to western economies. Given their excess capacities, Chinese manufacturers have sought to rampant dumping into India, to ensure that their capacities are being utilized, and that there are minimum job losses in China.

This has led to order of magnitude increase in share of Chinese optical fibre in India, since COVID. It has grown from merely 2203 Mn FKM in 2019-20 to a whopping 13980 Mn FKM in 2022-23 (till January 2023), an over 5 times increase in a mere span of less than 3 years. Such illegal predatory pricing has deprived Indian manufacturers from being able to fairly access the Indian market itself.

Import Volume KFKM	2019-20	2020-21	2021-22	2022-23 (till Jan'23)	Growth
China	2203	2892	11002	13980	535%

Korea	194	244	589	109	-44%
Rest of World	821	1362	2372	1581	93%

The imports are pushing Indian manufacturers into distress sale at below production cost, and shifting of jobs to China.

Even though Indian optical fibre/optical fibre cable manufacturers are extremely competitive, and have immense experience, global benchmark quality, technology know-how and availability of skilled manpower, India is losing ground in international trade to Chinese manufacturers.

While China's optical fibre/optical fibre cable exports were much lower than that of India in 2016, Chinese players have in the past five years approached global markets with highly predatory pricing, crushing India's export success in terms of export volumes.

The trend is continuing, pushing the Indian industry further into trouble. Between 2021 and 2022 when the demand for global optical fibre rose from 52 MN FKM to 540 Mn FKM, Chinese exports grew by 82% as against India's 44%.

The situation arising from Chinese imports is nothing short of being alarming and is war by other means.

The products from China do not necessarily adhere to acceptable global standards. Incidentally, the US and several other West European telecom operators have held back quality approvals for optical fibre from Chinese companies.

European Union (EU) levied anti-dumping duties on import of optical fibre cable from China in 2021. But there were signs that the anti-dumping duties were being absorbed and not providing effective protection for the EU industry. Hence in December 2022, EU initiated an anti-absorption investigation concerning the anti-dumping measures on imports of optical fibre cable originating from China. UK has also initiated an anti-dumping duty inquiry into optical fibre cable imports from China while Brazil too is planning to initiate anti-dumping investigations.

However, the import of Chinese products whose quality are suspect is continuing in India. There are growing fears that deployment of such products can compromise the quality of projects where they are being used.

4 Issue 2: Loopholes in the PPP-MII (Public Procurement-Preference to Make in India) Policy of 2017

The PPP-MII policy was adopted to ensure that Indian products are provided with preferential access to Government market. Though intended to boost local industry by giving preference to local suppliers in all government procurement, the true intent of the policy is being routinely violated.

The biggest loophole that exists today with the implementation of the PPP-MII policy is that the percentages for the requirement of local content are calculated based on the total Project cost and are not based on the cost spent on the Product.

The policy mandated minimum local content requirement of 50% for Class-1 local suppliers and 20% for Class-II local suppliers. It further allowed the nodal Ministry/Department the flexibility to

notify minimum local content requirement higher than 50% and 20% for any particular item. It was implied that the minimum local content requirement would be on the higher side for all items, unless notified to be lower for any particular item.

However, the existing loopholes are allowing many to violate the provisions of the policy and import products rather than to procure them locally.

A good example to illustrate the loophole could be the following scenario: A contractor is supposed to construct a conference room in a government office under an EPC contract, installing among other things an EPBAX system, Projector Data Wall, and an air-conditioning system. Although EPBAX and air-conditioners are mandatorily required to be sourced from local sources under the PPP-MII policy, the existing guidelines do not prevent the contractor from supplying and installing imported EPBAX and air-conditioners in the conference room. Despite importing the products, the EPC contractor can still qualify as a local supplier since out of the total project cost of say, INR 100 lakhs, the imported equipment may be costing only INR 30-40 lakhs. Having spent on civil construction that would include from cement to bricks and labour which are locally sourced, the contractor is still able to claim all the benefits of Class-1 local supplier with 60-70% local content. This is not the intent of the PPP-MII policy.

The contractor benefits by side-stepping the provisions of the PPP-MII policy by importing products at a low price that are also likely to be of doubtful quality.

But the local industry undoubtedly suffers.

Such exploitation of the loopholes is having an extremely adverse impact on various sectors of the Indian industry, including on the Optical Fibre manufacturers with EPC contractors claiming the benefits of Class-1 local supplier despite deploying imported equipment in the projects.

A closer look at the typical cost break-up of Digital Infrastructure Projects and how it can be exploited by a contractor for his own benefit helps to highlight the existing loophole the best:

- Power Infra – 4%
- Passive materials (poles, ducts, etc.) – 18%
- Cable – 30%
- Active materials (OLT, ONT, G-PON, wireless equipment etc.) – 8%
- Services (digging, trenching, backfilling, etc.) -35%
- Active services (integration) – 5%

The above break-up of the actual spend shows that contractors selected for BharatNet projects can import 100% of cable and active materials, and still qualify under the existing PPP-MII policy. The contractor has wholly imported cable and active materials, but has spent locally enough – for civil construction and others – to meet the 50% local content benchmark.

Clearly, the objective of PPP-MII policy to promote local products is being defeated because of the existing loophole.

There is therefore an urgent need to apply the PPP-MII policy criteria on products for which there is sufficient capacity rather than on entire project cost.

Once the loophole in the PPP-MII policy is remedied and the threat from Chinese imports is addressed, the Indian optical fibre/optical fibre cable industry can expectedly rediscover its competitive edge, making India the fibre capital of the world.

5 Issue 3: Continuing import of Preform

Preform is at the core of manufacturing optical fibre. High-quality fibre that is made out of preform, sustains and protects digital networks deployed in infrastructure projects.

At present, preform is largely imported into India with foreign companies making extremely large profits though India has sufficient preform capacity to meet its requirements. As against the domestic requirement of 26mfkm (equivalent), India's preform manufacturing capacity is 38mfkm.

The foreign companies exporting preform to India are also reluctant to transfer preform technology to their Indian counterparts. It also makes India's digital supply-chain susceptible to disruption and can be held hostage to global geopolitics.

Preform is the engine of optical fibre, which again provides the backbone to India's broadband network expansion. To be dependant on imports for manufacturing optical fibre is therefore not advisable. Given its importance to India's digital infrastructure, it is critical that Indian companies have complete control over the value chain of optical fibre. With that in mind, Indian preform manufacturers needs to be protected and incentivised.

Applying 20% duty on import of all preforms will boost Indian preform manufacturers. It will enable them to scale up preform manufacturing and even export to the rest of the world.

6 Issue 4: The Need for Creating HNTE category

Companies are categorised under High and New Technology Enterprise (HNTE) programme globally to circumvent WTO regime. In 2013, China introduced HNTE programme, offering qualified companies a 15% tax rate compared to the standard 25%.

Introduction of similar HNTE programme in India will reduce cost of manufacturing, making domestic manufacturers further competitive in the global market.

7 Issue 5: Rationalising RoW

A streamlined RoW (Right of Way) policy for use of street furniture such as electric poles for rolling out optical fibre cable networks is crucial for projects such as BharatNet2.

The Government of India has already notified several amendments to the RoW policy. They now need to be adopted and implemented on the ground.

The implementation of a streamlined RoW policy will bring down costs, reduce permission delays and fast-track the roll out of optical fibre cable networks.

For example, if optical fibre cable is being laid along a road going through a forest, there should not be the necessity to take fresh clearance from the forest department since the road along which the cable is being laid has already been approved by the appropriate authority.

8 Conclusion

As explained above, the Indian optical fibre/optical fibre cable industry can translate into reality India's potential of becoming the optical fibre/optical fibre cable capital of the World, provided it receives the necessary support.

Instead of marching towards becoming the fibre capital of the world, it appears that the Indian fibre optic industry is in the throes of a crisis, facing unacceptable dumping and predatory pricing from Chinese imports.

The problems the industry face are of serious nature and need urgent and immediate remedies .

Corrective measures would support and boost the Indian optical fibre/optical fibre cable industry. It would further its competitiveness and make it Atmanirbhar.