RoDTEP

Remission of Duties and Taxes on Exported Products in Electronics

ICEA

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A report by IKDVHAJ ADVISORS LLP

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Introduction

The world is on its way to a gradual but steady recovery from the COVID 19 pandemic. However, as economies around the world continue to reel under the after effects of the global disruption in trade and growth, the COVID crisis has given birth to a distinct avenue for countries like India to look towards exports and local manufacturing as a way to catapult itself out of the crisis. A boost to exports is particularly important as in general high growth countries have relied significantly on exports as an important part of the momentum.

In light of limited economic activity and disruptions to traditional trade mechanism, firms world-over have been forced to examine de-risking manufacturing out of China and diversifying their production/ procurement. The post COVID-19 era might thus present India an unprecedented opportunity to establish itself as a trusted alternative destination for manufacturing and tread down the path of becoming a net exporter with a significant global presence in some products such as mobile phones and related Electronics products and components.

Introduction

The government of India has been steadfast in recognising the criticality of exports, particularly Electronics exports in the India growth story. Taking cognisance of some of the disabilities faced by Indian Electronics manufacturing sector, the Indian Government has taken policy measures to increase competitiveness of the sector by providing incentives and increasing the overall ease of doing business.

While making policy recommendations for promoting exports from a sector, it is important to consider the major factors that influence global investment decisions. An earlier study by ICEA has identified ten major factors (with different individual weights) that should be examined to analyse the relative attractiveness of different nations to the potential investors in Electronics manufacturing sector. This study revealed that in comparison to India, Vietnam is 1.7 times more attractive for investors, while China is twice as attractive. The study report identified eight broad types of incentives and support policies, common to both China and Vietnam, which are offered to investors. They comprise:- making available quality infrastructure and skills, low charges for the use of infrastructure made available, subsidies for reducing costs and improving competitiveness, improving the ecosystem for the development of the supply chain in the domestic market, stability of policy, ease of doing business, focus on attracting mega-firms or "lead firms" in Global Value Chains, and periodic reviews to revise the incentive and facilitation schemes. The incentives are aimed mainly at reducing costs and increasing retained profits, both leading to higher competitiveness. The cumulative impact of all these incentives in Vietnam vis a vis India has been estimated as a "disability" faced by Indian producers/exporters. This assessment reveals that if similar policies were implemented in India, the cost reduction or competitiveness gains for investors would range from 9.4% to 12.6%. A similar exercise for China estimates that the weight of disability vis a vis China for investors in India ranges from 19.2% to 21.7%.

The Merchandise Exports from India Scheme (MEIS) has been a major support scheme for exports from selected sectors. This scheme is now being phased out, following a dispute settlement decision of a WTO Panel that this scheme is WTO-inconsistent. In light of India's current export disabilities, an adequate replacement of MEIS is critical to avoid the scale of these disabilities becoming even more acute as MEIS phases out in December 2020.

The National Policy on Electronics 2019 (NPE 2019) envisions positioning India as a global hub for Electronics System Design and Manufacturing (ESDM) by encouraging and driving capabilities in the country for developing core components, including chipsets, and creating an enabling environment for the industry to compete globally. Three schemes were announced in March 2020 to implement the NPE 2019 policy vision and objectives. These include Production Linked Incentive (PLI) Scheme for Large Scale Electronic Manufacturing, Scheme for Promotion of manufacturing of Electronics Components and Semiconductors (SPECS), and Electronic Manufacturing Cluster 2.0 (EMC 2.0) Scheme.

These schemes aim to offset the disabilities faced by this industry and incentivise development of a robust Electronics manufacturing ecosystem in the country. However, the combined impact of these schemes may not be sufficient to overcome the disabilities and make India a truly competitive manufacturing destination, particularly as the major existing scheme for export promotion namely MEIS is being withdrawn.

In order to attenuate the disabilities which will be reinforced with the withdrawal of MEIS, the Indian Cabinet has approved a Remission of Duties and Taxes on Exported Products (RoDTEP) scheme. This scheme involves a refund of all indirect taxes, levies and duties at the border for exports, including such taxes on inputs of exported products. Such a remission of indirect taxes, levies and duties are allowed under the WTO, and similar schemes are also implemented by several other countries, including India's major competitors in world trade.

This report delves into identifying and unbundling indirect taxes which are allowed to be refunded or remitted under the WTO. On this basis a calculation of RoDTEP rates for some major electronic export items have been made. The rates estimated in this report identify the unremitted duties/taxes/levies at the Central, State and local level, borne by the exported products, including prior stage cumulative indirect taxes on goods and services used in the production of the exported product. The report also identifies the specific electronic goods and components that need to be prioritised in order to effectively utilise the RoDTEP that is made applicable for electronic goods.

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Chapter 1

Introduction to RoDTEP

Approved by the Cabinet in March 2020, Remission of Duties and Taxes on Export Products (RoDTEP) is a scheme that aims to reimburse the exporters all Central and State taxes/duties/levies which are not currently refunded under any of the existing schemes but are incurred at the manufacturing and distribution process. The key objective of the scheme is "zero-rating" of Indian exports and making Indian products cost-competitive in the global market.

In September 2019, Finance Minister, Hon'ble Smt. Nirmala Sitharaman, announced a full replacement of the MEIS with a WTO compliant incentive scheme attaching a budgetary allocation of INR 50,000 Cr. Soon after this announcement, the Cabinet approved RoDTEP in March 2020.

The process to determine the RoDTEP rate for products across tariff lines is currently underway. The Committee set up by the Cabinet to determine the rates and collate industry inputs, data and disabilities, is currently summoning sectors for inputs in a phased manner with Textiles, Steel and Automobile sectors already in active engagement with the committee.

As India nears the elimination of MEIS incentives for exporters, the criticality of the RoDTEP exercise becomes even more acute to avoid disruption in the steady momentum of Electronics exports. Since the applicable rates for exports are not yet fixed, a proactive engagement and exchange of information between the Committee and industry is paramount to establish the reimbursement rates and keep India on its path to exponential export growth for this sector.

RoDTEP has been conceptualized as a scheme to offset the disabilities caused by the discontinuation of MEIS and to help restore the competitiveness of Indian exporters through a WTO-compliant scheme. In this context, it cannot be emphasized enough that RoDTEP is not a subsidy scheme like the MEIS.

It is a scheme that refunds the indirect taxes that the industry pays at various stages of its production process and those paid by embedded inputs. Several countries have been implementing similar schemes for a long time.

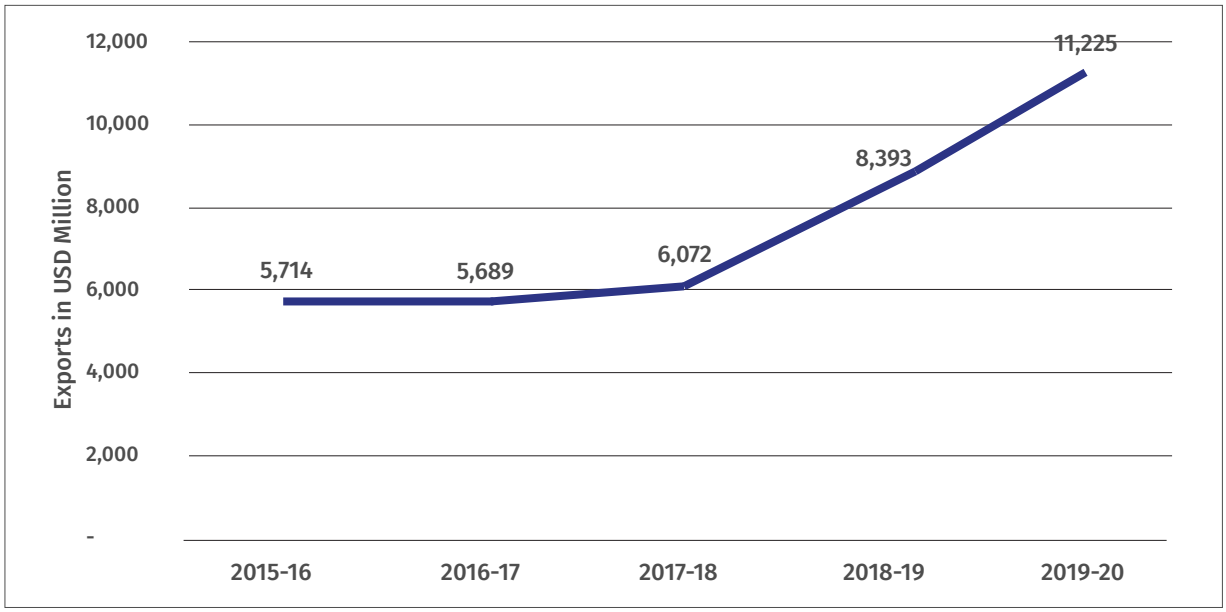
1.1 MEIS to RoDTEP: Timeline of Events

Announced in 2015 under the Foreign Trade Policy (FTP), the Merchandise Exports from India Scheme (MEIS) was created by merging five reward schemes. Initially, exporters earned duty credits at fixed rates of 2 per cent, 3 per cent, and 5 per cent, depending on the export of certain products to three sets of countries. While it originally covered 4,914 tariff lines, it currently covers 8,059, which constitute 75 per cent of all traded products.

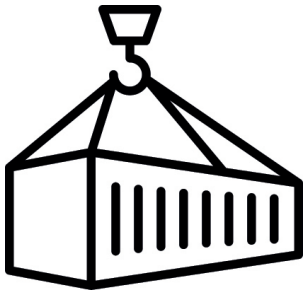
Though MEIS was introduced in 2015 to provide export subsidy to 372 tariff lines pertaining to electronic goods that are covered under Chapter 85, 85 and 89 of HS Classification Code, India's Electronics exports remained stagnant in the period from 2015-16 (USD 5.7 Bn) to 2017-18 (USD 6.4 Bn). This was essentially due to the fact that industry rate of 2% was made applicable to all such tariff lines in a uniform manner without considering the underlying disability in production of such goods and their export potential. An additional 2% MEIS was notified for 121 tariff lines in December 2017 in response to the demand from the industry. The impact of such an increased rate of export subsidy was immediately visible as export of electronic goods increased substantially from USD 6.4 Bn in 2017-18 to USD 11.22 Bn in 2019-20, exhibiting a growth of 85%. In absolute terms over a five-year

period exports of Electronics grew by 96% from 2.2% to 3.6% of the total exports from India. The export of Electronic goods within 1 year from 2018-19 to 2019-20 itself grew by over 34% increasing from USD 8.8 Bn in 2018-19 to USD 11.2 Bn in 2019-20. Thus, increase in MEIS rate has amply demonstrated its positive impact on exports of Electronic goods over the last two years which has made this sector as one of the top performers in terms of percentage growth in exports.

Figure 1.1.1: Export of electronic items between 2015-20



National Policy for Electronics 2019 envisages a huge increase in exports, for example, USD 110 Bn for mobile phone exports in 2025, an increase of about 30 times the exports in 2019-20. This ambitious target is possible with the relevant support schemes that counter India's "disabilities" and provide a level playing field for the producers here. In this context, in addition to the PLI scheme, it is very significant to make-up the loss in such incentives when the MEIS scheme is phased out. The role of RoDTEP for mobile and other Electronics products is to achieve a highly ambitious yet feasible export target for India.



1.1.1 WTO Dispute: India's Export-Related Measures (Report of the Panel: WTO document W/DS541/R)

Taking cognizance of these developments, the United States challenged five categories of India's export subsidy schemes in March 2018 before a WTO Dispute Settlement Panel (WTO, 2019): [1]

Export-Oriented Units Scheme and sector-specific schemes, including Electronics Hardware Technology Parks (EHTP) scheme;

- Merchandise Exports from India Scheme (MEIS);
- Export Promotion Capital Goods (EPCG) scheme;
- Special Economic Zones (SEZ) scheme; and
- Duty-Free Imports for Exporters Programme.

The US Trade Representative (USTR) contested the export subsidies provided within these five schemes to be inconsistent with Article 3.1(a) and Article 3.2 of SCM Agreement. [2]

The Panel said MEIS, because of its design, structure and operation, did not qualify for the exemptions from the prohibition.

India argued that the objective of the scheme was remission of indirect taxes borne by the exported product. It further said MEIS could not be deemed a subsidy [3] in light of footnote 1 of the SCM Agreement, which states that such remission is not a subsidy.

The Panel, though, pointed out that the provisions of the Foreign Trade Policy (FTP) did not substantiate India's argument as entitlement to MEIS depended upon exports of notified products to notified markets and the rate of rewards specified in Appendix 3B of FTP. The Panel held that 'the duty credit scrips awarded under MEIS are subsidies contingent upon export performance, inconsistent with Articles 3.1(a) and 3.2 of the SCM Agreement'. [4]

It concluded that India's other export subsidy schemes were also inconsistent with the SCM Agreement's provisions. The Panel recommended that India withdraw certain 'prohibited subsidies' under the EOU/EHTP/BTP, EPCG and MEIS schemes within 120 days and under the SEZ scheme within 180 days from the adoption of its report.

The Indian Government decided to phase out MEIS and replace it with a WTO-consistent scheme, Remission of Duties and Taxes on Exported Products (RoDTEP). [5] The Directorate General of Foreign Trade clarified through its Trade Notice Number 03/2020-21, dated 15 April 2020, that MEIS would be available to exporters up to 31 December 2020. [6] If prior to this last date, an item/tariff line/HS code is notified to be covered under the RoDTEP scheme, it would be removed from MEIS's coverage.

1. *See, WTO document WT/DS541/1 and G/SCM/D119/1, dated 19 March 2018.*
2. *Article 27.2(a) and Annex VII(b) of SCM Agreement. Article 27.2(a) states that: "The prohibition of paragraph 1(a) of Article 3 shall not apply to: (a) developing country Members referred to in Annex VII.*
3. *The text of Footnote 1 of the SCM Agreement states that: "In accordance with the provisions of Article XVI of GATT 1994 (Note to Article XVI) and the provisions of Annexes I through III of this Agreement, the exemption of an exported product from duties or taxes borne by the like product when destined for domestic consumption, or the remission of such duties or taxes in amounts not in excess of those which have accrued, shall not be deemed to be a subsidy." (emphasis added)*
4. *For more detail of the Panel's reasoning, see the Panel Report in WTO document WT/DS541/R, dated 31 October 2019.*
5. *https://pib.gov.in/PressReleseDetail.aspx?PRID=1606281*
6. *More recently, the Government has decided to block the online MEIS module from 23rd July 2020, due to the allocated funds under the scheme reaching a pre-specified budgeted level.*

1.2 Rethinking export incentives through RoDTEP

Following the Dispute Resolution Panel's judgment to withdraw some export subsidy programmes, the Government of India approached the appellate body of WTO in November 2019, challenging the decision. Currently, the appeal is pending before that body. Meanwhile, the Indian Government has decided to discontinue or amend existing export incentive schemes that were found to be WTO-inconsistent.

1.2.1 Cabinet Decision on RoDTEP

On 13 March 2020, the Union Cabinet decided to withdraw MEIS in phases, [7] and replace it with RoDTEP, which will be implemented by the Department of Revenue, Ministry of Finance, in a phased manner.

RoDTEP will cover taxes/duties/levies at the central, state and local level that are not reimbursed currently under any other mechanism, but which are incurred in the process of manufacture and distribution of exported products. These include duty on electricity charges; VAT on fuel used in transportation, captive power generation; duties imposed on farm sector; stamp duty on export documents; CGST and compensation cess on coal in power generation; central excise duty on fuel used in transportation; and CGST and any other levies that still remain unrebated. The rebate through RoDTEP will be claimed as the percentage of the realized FOB value of exports. As per the Cabinet decision, [8] the sequence of introduction of the scheme, prioritization of the sectors to be covered, degree of benefit to be given on various items within the rates set by the Committee [9] will be decided and notified by the Department of Commerce.

Although MEIS will be available up to 31 December 2020, [10] even during the period till end-December 2020, the RoDTEP scheme may be notified for any specific product. When the rates under RoDTEP are announced for a tariff line/item, MEIS benefits on it will be discontinued.

A monitoring and audit mechanism, with an information-technology-based Risk Management System, will be set up to physically verify the records of exporters. Unlike MEIS's transferable scrips, RoDTEP will create an electronic credit ledger in the customs system, which would enable digital refund to exporters.

7. *https://pib.gov.in/PressReleseDetail.aspx?PRID=1606281*
8. *https://pib.gov.in/PressReleseDetail.aspx?PRID=1606281*
9. *See the notification at https://www.cbic.gov.in/resources//htdocs-cbec/Constitution-RoDTEP-Committee.pdf*
10. *http://www.eepcindia.org/download/200610224418.pdf*

Refund of indirect taxes under RoDTEP will be a step towards 'zero-rating' of exports, along with other reimbursements such as Drawback and IGST. This scheme will improve the cost competitiveness of India's exports and provide a level playing field for Indian producers in comparison to exports from competing countries in the international market.

RoDTEP will introduce measures allowed under WTO, creating an initiative taken similarly by other economies. It will help address the disability faced by Indian exports by reducing the burden due to non-remission of indirect duties and taxes on exported products. Certain policies such as the recent amendment in GST Act to restrict the valuation of goods by exporters has impacted the working capital of businesses and created an additional cost burden on exports. Thus, a WTO-consistent policy such as RoDTEP should be implemented to improve the operational conditions and benefits of both exports and investment.

Conclusion

To benefit from RoDTEP, the government should determine the amount of all the relevant unremitted taxes covered by the scheme. As a priority, the scheme could start with major items of current exports or those with high potential for exports within the next few years. A thorough and comprehensive estimation of the relevant indirect taxes is crucial for giving a justified push to India's exports. Chapters 2 to 4 address these major aspects of RoDTEP for key electronic products.

Chapter 2

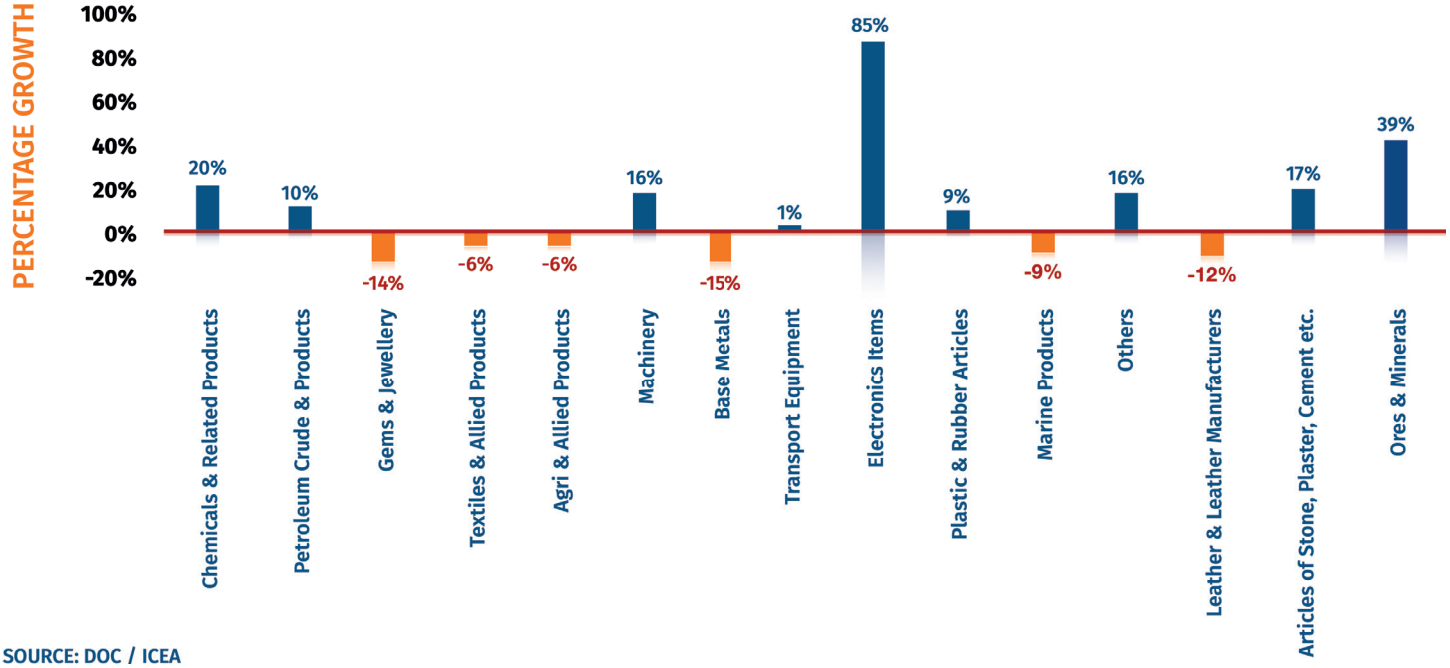
Prioritising Electronics product for RoDTEP estimation

India is steadily on its way towards becoming a trusted partner for the global value chains (GVCs) in the Electronics sector. With global value chain disruptions caused by COVID 19 in addition to the changing dynamics of global trade, it is important that India creates an enabling ecosystem and adequate incentives for Electronics manufacturing and export capacity to move to India.

As illustrated in Chapter 1, Electronics exports from India reached USD 11.8 Billion in the FY 19-20. Export incentive schemes like MEIS played a major role in boosting exports and localizing manufacturing capacity. The export incentive of 2% under MEIS was offered for 372 electronic product lines (HSN Code) since 2015. An additional 2% MEIS was notified for 121 tariff lines in December 2017 in response to the demand from the industry. The impact of such an increased rate of export subsidy was immediately visible as export of electronic goods increased substantially from USD 6.4 Bn in 2017-18 to USD 11.22 Bn in 2019-20, exhibiting a growth of 85%.

In absolute terms, over a five-year period exports of Electronics grew by 96% from 2.2% to 3.6% share of the total exports from India. The export of electronic goods within 1 year from 2018-19 to 2019-20 itself grew by over 34% increasing from USD 8.8 Bn in 2018-19 to USD 11.2 Bn in 2019-20. Thus, an increase in MEIS rate amply demonstrated its positive impact on exports of electronic goods over the last two years which has made this sector as one of the top performers in terms of percentage growth in exports.

Figure 2.1.1: Export growth during 2017-18 to 2019-20



SOURCE: DOC / ICEA

As illustrated in Figure 2.1.1 above, the export performance of the Electronics sector has shown immense promise under enhanced MEIS rates prioritized for 121 tariff lines since the year 2017. The phenomenal growth in exports at 85% for the Electronics sector makes it one of the highest growth sectors of India. Taking account of the highly ambitious exports targets announced in NTP 2019 and the potential shown by this sector in export performance, it is very important to sustain the incentives for this sector's exports through the RoDTEP scheme.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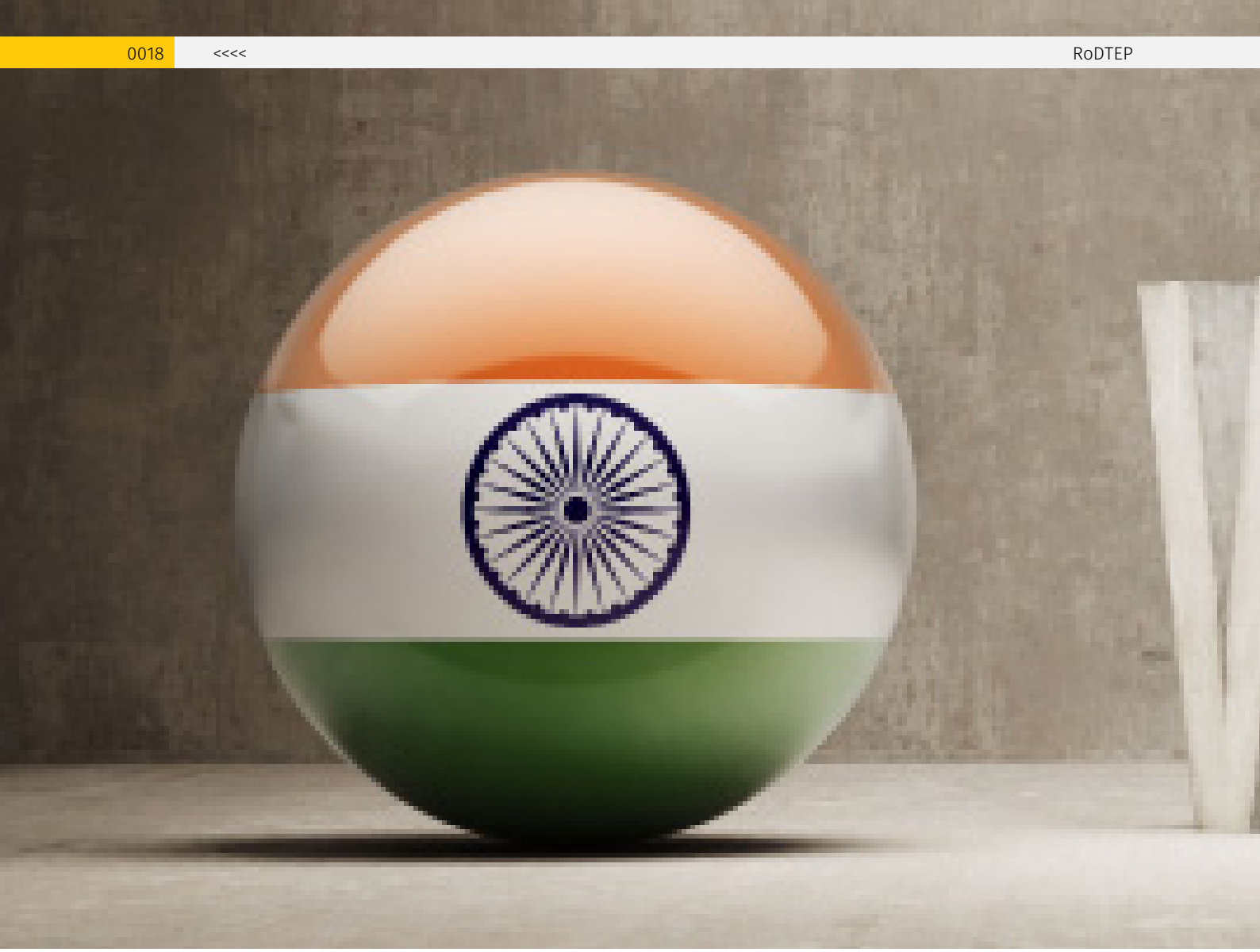


2.1 Identifying Priority Products in Electronics

Electronics product exports are covered under 372 HS Codes. While Electronics overall displayed exponential growth in response to increased incentives, not all products were uniformly responsible for the unprecedented growth. The key products that registered high growth in exports over the last few years were much less than 372 items (see for example, Table 2.1.1 below). These products offer a high growth potential and an opportunity for India to consolidate its status as a global export hub.

Table 2.1.1: Exports of Key Electronic Products and the Applicable MEIS Rates

(All Figures in US$ Million)

Products	2017-18	2018-19	2019-20	MEIS till November 2017	MEIS Post December 2017	Exports Growth 2017-18
Smart Phones	209.41	1598.1	2875.79	2%	4%	1,273%
Feature Phones	2.59	14.55	961.33	2%	4%	37,017%
Battery Chargers	122.35	236.49	471.82	2%	2%	286%
PCBA	44.37	73.12	145.88	2%	4%	229%

Source: Ministry of Commerce & Industry and ICEA estimates

Section 2.2 provides below a focused approach to identify priority areas within Electronics. It discusses certain criteria for prioritization and identifies the relevant products for this purpose, including mobile phones, portable computing devices, and related components & assemblies thereof ('products').

2.2 Criteria for selecting priority products

RoDTEP, as a scheme, seeks to both mitigate the impact of phasing out MEIS as well as encourage domestic production so India can become a manufacturing hub for the Electronics global value chains (GVCs). In this context, four criteria have been selected to identify the priority products for this exercise. We first discuss two criteria linked to export performance at present and in the future, and then two other criteria that indicate a shift in investment in the near future to boost exports and products with technological impact on the domestic ecosystem.

a) Large export base: Prominent export products should be prioritized in the order to ensure they are covered by an export support initiative after MEIS is phased out.

An indication of the largest export categories is provided by Table 2.2.1 below. This is based on a detailed product list and export levels shown further down in Table 2.2.5. Mobile phones dominate the list. With exports of around USD4 billion in 2019–20, they account for 52% of the total exports of the products shown in Table 2.2.1, a sharp increase from 36.5% in 2018–19. Power adaptors/chargers have the second largest share– 6.4% in 2019–20 in comparison to 5.4% in 2018–19.

In addition to finished products, Tables 2.2.1 and 2.2.5 also show high exports under an aggregative category 'Others'. As this includes all products not covered under the specific categories, it is not considered here for a particular emphasis. The focus is on those categories for which specific products can be identified. Based on this criterion, the second largest export category that emerges is power adapter/chargers.[11] The export performance of the other product categories is shown in Table 2.2.5.

Table 2.2.1 : Export of Major Electronic Products from India

(all in USD Mil)

HSN 85171290
SMARTPHONE

Apr - Mar, 2017 - 18
209

Apr - Mar, 2018 - 19
1598

Apr - Mar, 2019 - 20
2875

HSN 85171210
FEATURE PHONE

Apr - Mar, 2017 - 18
2

Apr - Mar, 2018 - 19
14

Apr - Mar, 2019 - 20
961

HSN 85044030
BATTERY CHARGERS

Apr - Mar, 2017 - 18
122

Apr - Mar, 2018 - 19
236

Apr - Mar, 2019 - 20
471

HSN 85177010
PCBA

Apr - Mar, 2017 - 18
44

Apr - Mar, 2018 - 19
73

Apr - Mar, 2019 - 20
145

Source: ICEA

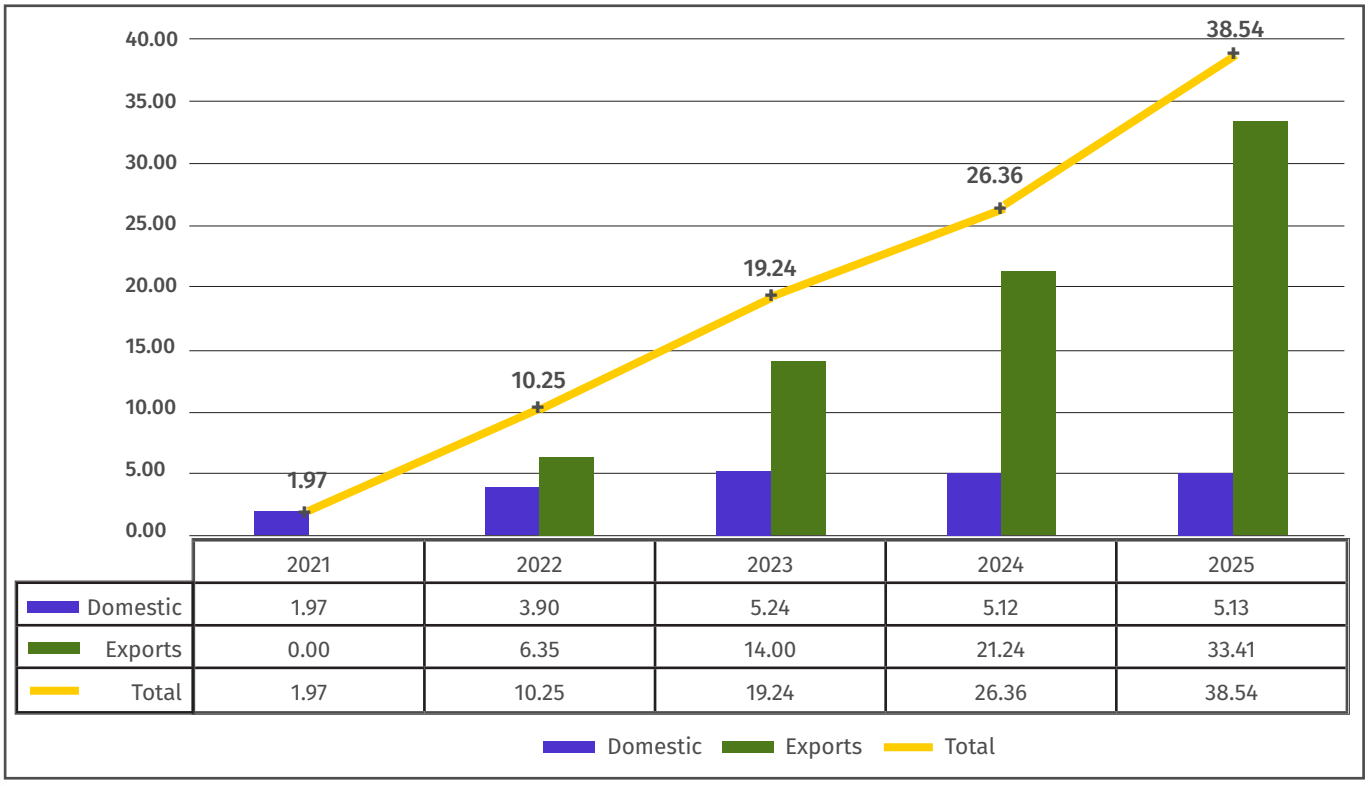
Note: These products constitute roughly 60% of the total exports of all electronic items under chapter 85 of the HS code

11. *The third highest share is for HS category 85371000 (Boards etc. for a voltage<=1000volts). This category had an export share of 6.06% in 2019-20, down from 8.7% in 2018-19.*

b) Large potential for major increase in exports in 2018: India overtook Vietnam to become the second largest manufacturer of mobile phones, after China, with a world share of 11%. Between 2013 and 2017, while India's import of mobile handsets declined from USD4.47 billion to USD3.31 billion, that of mobile parts increased steadily from USD1.34 billion to USD9.41 billion (Economic Survey, 2019-20).

With an increase in domestic production and export incentives, the export of mobile handsets increased significantly between 2017 and 2020. In 2019–20 alone, the export of mobile phones grew by almost 240% as compared with the previous year. This pattern is consistent with the likely emergence of India as an assembly center for mobile handsets, especially with the investment planned post the announcement of the Production Linked Incentive (PLI) scheme in March 2020. One estimate suggests that India could manufacture around 1.25 billion handsets across various segments by 2025, firing up an industry worth USD230 billion (ICEA-McKinsey, 2018). The National Policy on Electronics, 2019, also seeks to increase the export of mobile phones to USD110 billion by 2025. This implies an increase of almost 30 times the export in 2019–20. With the projected growth in the production and export of mobile phones, there naturally will be a simultaneous growth of other products linked to mobile phone production.

Figure 2.2.1: Laptops, tablets and desktop computers manufacturing (US$ billion)



	2021	2022	2023	2024	2025
Domestic	1.97	3.90	5.24	5.12	5.13
Exports	0.00	6.35	14.00	21.24	33.41
Total	1.97	10.25	19.24	26.36	38.54

Along similar lines, Laptops and Tablets offer a promising and exponential potential of global exports. The global market for these two products is expected to be largely around USD 220 billion per year over the next five years. This presents an opportunity for India to ramp up the export of 'Made in India' laptops and tablets. This will achieve the twin objectives of reducing dependency on China and making in India for the world to obtain a sizable share of the global market, besides other benefits––such as employment creation by way of 5 lakh additional jobs; 1.26% contribution to India's GDP by 2025; a cumulative inflow of foreign exchange to the tune of USD 75 billion; and investment of over USD 1 billion. This may result in manufacturing value of USD 100 billion.

Based on feedback from the industry, a longer list of products with high export potential is created, as shown in Table 2.2.2 below. This Table provides a list of the specific product categories that either have a relatively large export base at present or a high potential for exports in the near future provided relevant incentive schemes are implemented to support the effort.

Table 2.2.2 Electronic Products with a Large Export Potential

Type of Product	Product has a large export base at present or in the near future (A)	Product has large potential for major increase in exports from India (B)
Finished Products	Mobile phones (Feature phone/ Smartphone) (US$ 3,836.92 Mn)	Mobile phones (Feature phone/ Smartphone)
Sub-Assemblies	Power Adapters/Chargers for Mobiles, PCs, Laptops, Tablets, Watches, Speakers (US$ 471.8 Mn)	Power Adapters/Chargers for Mobiles, PCs, Laptops, Tablets, Watches, Speakers
Sub-Assemblies		Battery packs
Sub-Assemblies		Camera Module
Sub-Assemblies		PCBA
Sub-Assemblies		Cables
Sub-Assemblies		Display Assemblies for Mobiles, PCs, Tablets
Components		Coils
Finished Products		Smart Watches
Finished Products		Bluetooth Speakers, Ear Phones

Source: ICEA

Notes: For Category (A), the numbers in parentheses show export of the product in 2019–20.

We now consider two other criteria linked to possibility of shifting global export hub to India and a large impact on enriching the domestic ecosystem.

c) Products for which a major part of global export capacity could be shifted to India: Each country has a distinct combination of factors and resources that give it a unique competitive advantage. In light of that, it is important to see which value chains have a significant potential to shift to India. For instance, it may be possible to produce the lower quality version of a particular product faster in India than the higher quality one, which may take considerable time. For example, the supply chain for high-quality display is based out of Japan and USA, whereas that for products like mechanics and PCBA is likely to shift to India earlier. Therefore, it is critical that India prioritizes incentivization of those products whose major global manufacturing can be attracted to India soon.

Based on feedback from the industry, Table 2.2.3 shows those products whose manufacturing (including export hubs) could be shifted to India in the near future. With large-scale shift in production capacity of firms with established links to global markets, India could become a significant export-oriented economy in the Electronics sector.

Table 2.2.3 Products for which major part of export capacity could shift to India

Type of Product	Products for which a major part of global export capacity could be shifted to India
Finished Products	Mobile Phones (Feature Phone/Smartphone)
Sub-Assemblies	Power Adapters/Chargers for Mobiles, PCs, Laptops, Tablets, Watches, Speakers
Sub-Assemblies	Battery Packs
Sub-Assemblies	Camera Module
Sub-Assemblies	PCBA
Sub-Assemblies	Cables
Sub-Assemblies	Display Assemblies for Mobiles, PCs, Tablets
Components	Coils

Source: ICEA

d) Products that will increase domestic technological capacity: Electronics is a technology-intensive industry. While assembly operations have started in India, manufacturing at larger scale will require significant strides in global value chains. The presence of leading global firms, coupled with an export-oriented policy, may provide the necessary trigger to enable technology transfer.

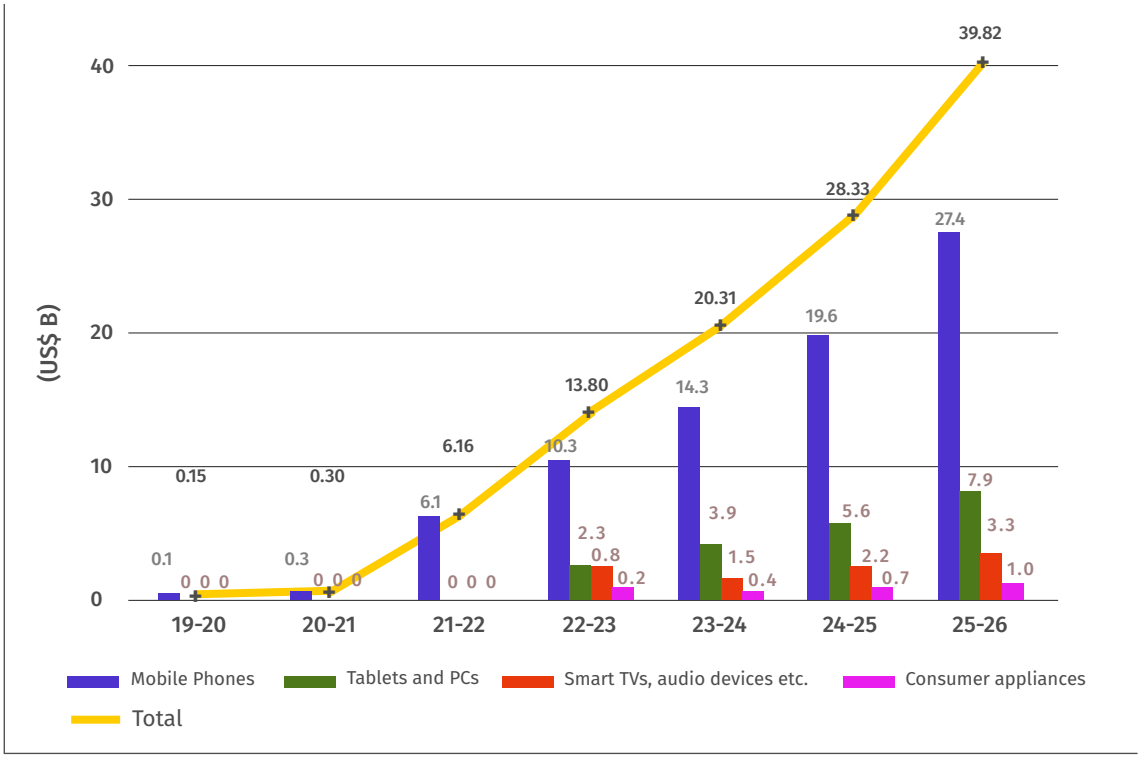
Table 2.2.4: Products that will increase domestic technological capacity

Type of Product	Products that will increase domestic technological capabilities and strengthen/improve the domestic ecosystem
Finished Products	Mobile Phones (Feature Phone/Smartphone)
Sub-Assemblies	Power Adapters/Chargers for Mobiles, PCs, Laptops, Tablets, Watches, Speakers
Sub-Assemblies	Battery Packs
Sub-Assemblies	PCBA
Finished Products	Smart Watches
Finished Products	Bluetooth Speakers, Ear Phones

Source: ICEA

A specific example is the PCBA, which not only constitutes core technology across multiple finished products, but also presents a massive export potential from India over the next five years. A study by ICEA and EY shows that the PCBA exports from India propelled by an appropriate incentive scheme has the potential of approximately USD 100 billion during the period 2021-2026, as shown in Figure 2.2.2. Moreover, the export of PCBAs will lead to developing not just core competence and competitiveness, but also expand the domestic ecosystem for components, since PCBA is considered as the engine of the components sector.

Figure 2.2.2: Export opportunity for PCBAs from India



Source: Department of Commerce, Exports of HSN 85177010 and ICEA estimates

Therefore, India should incentivize the manufacturing of those products that will attract new technology to the country or provide a basis for domestic producers to upgrade their technological capabilities. This will likely push up the manufacturing frontier of the country and lead to conditions that will sustain the momentum for growth and exports over a long period. Hence, RoDTEP should cover those products that will increase domestic technological capabilities and further develop the domestic ecosystem.

e) 'Other products' with potential for high export from India: Table 2.2.5 also provides a list of 'other products' that should be considered in terms of exports. For this category, it considers those products with high export potential that had an export level of at least USD100 million in 2019–20 (or a share of about 1.4% in the total export of all products in 2019–20, given in the table). Below is a summary picture for the final products, sub-assemblies and components that show their exports as well as relevance in terms of the above-mentioned four criteria.

Table 2.2.5 List of Products for RoDTEP

SN	List of Products	Criteria*				Exports (US$ in Million)		HSN COdes	Potential Players
		a	b	c	b	2018-19	2019-20		
Finished Products									
1	Mobile Phones (Feature Phone/ Smartphone)	✓	✓	✓	✓	1612.65	3,836.92	85171290	
2	Smart Watches		✓		✓			85171211	Xiaomi
3	PCs, Laptops, Tablets		✓					84713010	HP, Lenovo, Samsung
4	Bluetooth Speakers, Earphones		✓		✓	9.88	5.74	8518	
5	STBs/OTT STBs		✓			0.89	0.16	85176960	Flex, Hero
Sub-Assemblies									
1	Power Adapters/ Chargers for Mobiles, PCs, Laptops, Tablets, Watches, Speakers	✓	✓	✓	✓	236.49	471.8	85044030	Arshdeep (Nippy), Flex, Salcomp
2	Battery Packs		✓	✓	✓	-	-	85076000	Sunwoda, TDK
3	Camera Module		✓	✓	✓	-	-	85177090	Holitech, Sunny
4	PCBA		✓	✓	✓	73.12	145.88	85177010	Flex, Foxconn, Lava, Wistron
5	Cables		✓	✓				85444299	Arshdeep (Nippy), Foxlink
6	Display Assemblies for Mobiles, PCs, Tablets		✓	✓				85177090	CSOT, Holitech
7	Flex PCBA								Avary, Flex, Foxlink, Holitech
Components									
1	Enclosures		✓						Foxconn, Jabil
2	Coils		✓	✓					Salcomp
3	Connectors							85177090	Lava, RB
4	Mechanics		✓						Foxconn

SN	List of Products	Criteria*				Exports (US$ in Million)		HSN COdes	Potential Players
		a	b	c	b	2018-19	2019-20		
Others									
1	Boards, etc., for a Voltage<=1000 volt		✓			384.42	445.21	85371000	
2	Electric Inverters		✓			146.43	244.76	85044010	
3	Solar cells/ photovoltaic cells whether or not assembled in module/panel		✓			121.08	212.69	85414011	
4	Parts of transformers		✓			152.74	168.42	85049010	
5	Boards, panels, consoles, etc., for industrial use		✓			144.04	165.92	85381010	
6	Other parts of telephonic/ telegraphic apparatus		✓			185.64	158.66	85177090	
7	Other automatic regulating/ controlling instruments and apparatus		✓			126.43	155.59	90328990	
8	X-Ray tubes		✓			125.91	133.52	90223000	
9	Printed circuits		✓			137.48	121.39	85340000	
10	Parts of other electronic power machinery of HD 8504		✓			87.81	111.24	85049090	
11	Boards, etc., for the voltage > 1000 volts		✓			133.1	106.55	85372000	
12	Monolithic integrated circuits		✓			56.65	100.17	85423100	
13	Other electro-diagnostic apparatus					108.91	95.33	90181990	

SN	List of Products	Criteria*				Exports (US$ in Million)		HSN COdes	Potential Players
		a	b	c	b	2018-19	2019-20		
Finished Products									
14	LQD dielectric transformers having a power handling capacity not exceeding 650 KVA					97.49	84.42	85042100	
15	Instruments and appliances for aeronautic or space navigation (other than compasses)					22.27	68.48	90142000	
16	Other reception apparatus for TV etc. Colour					2.04	67.87	85287100	
17	Controllers					87.13	65.71	90328910	
18	Micro motor with output <=37.5 W					69.86	61.42	85011011	
19	Other transformers having a power handling capacity not exceeding 1 KVA					59.22	59.86	85043100	
20	Sim cards					60.42	57.57	85235210	
21	Other fixed capacitors, dielectric of paper/plastics					68.77	53.27	85322500	
22	Parts of articles of heading 8543					15.32	52.23	85439000	
23	Digital processing units					39.39	49.62	84715000	
24	Boards, panels, consoles, etc., for others use					49.46	46.88	85381090	

Source: ICEA and discussions with industry

Notes: * = The criteria shown in columns 3 to 6 of the Table are:

a. Have a large export base currently or will soon (e.g. products covered under the PLI scheme)
b. Provide a potentially large export base (assessed on the basis of substantive data and global market potential––this could be a product with a small export base at present)
c. Be products for which a major part of the global export capacity could be shifted to India (i.e. products with a huge potential for making India a major supplier within the global value chain)
d. Be products that will increase domestic technological capabilities and create a stronger basis for improving the domestic ecosystem

2.3 Inputs of identified priority products

Based on the above parameters and evaluation, the distinct products that emerge in descending order of priority are:

- Mobile phones (both smartphone and feature phone),
- Batteries/adapters
- Chargers

These items are currently exported from India and their export have been increasing. RoDTEP is calculated on the basis of the transport and power costs in the process of assembly. The same costs are also be calculated on inputs as well. It is important to note that the RoDTEP rate will go up as the indigenization of inputs increases over time.

The approximate share of various inputs in 'Bill of Materials' (BOM) for a smartphone are provided in Table 2.3.1.

Table 2.3.1 Percentage Share of Different Components in the Total BOM of Smartphone

Sr. No.	Sub Assemblies of Mobile Phone	% of BoM
1	Gift Box	1%
2	APTP	10%
3	Charger	2%
4	PCBA	45%
5	Battery	4%
6	Mechanics	9%
7	Display Assembly	14%
8	Mic, Receiver	1%
9	Connectors	1%
10	Ringer Vibrator Motor	1%
11	Camera Module	12%
Total		100%

Source: Primary survey of firms

Of these, around 24% of the parts that are small are procured locally. These include battery pack, others, USB cable, etc. BOM constitutes roughly 75% of the total cost of a smartphone and roughly 65% of the total cost of a feature phone. The full progress on indigenization is shown below.

2.4
De-containerization of Imported Value Chain: Impetus to Domestic Manufacturing Potential

While indigenization or local production and procurement of inputs is the target in mobile manufacturing, many products are still imported. Table 2.4.1 is a bird's eye view prepared by the ICEA on where the industry is with indigenization.

Table 2.4.1 Indigenization of Components of the Mobile Industry

Year/ Products	Internal ratings*	Remarks
2015		
APTP	10	CBU import is drastically down. Grey market has kicked in the higher end
Gift Box	10	Almost complete localization
2016		
Charger/Adaptor	9	Many brands still import; more aggressive outreach required.
Battery Pack	7	Progressing rapidly.
Wired Headset	4	Substantial work yet to be done.
2017		
Die Cut parts	0	Many factors
Mic and Receiver	1	ASEAN imports major threat
Mechanics	2	Many factors
Keypad	3	Many factors
USB Cable	7	Good progress
2018		
PCBA	9	Good progress except in case of Feature phone
Camera Module	2	One plant is coming up; long way to go.
Connectors	1	Long way to go
2019		
LCD Assembly	1	Work-in-Progress
Vibrator Motor	0	Work-in-Progress
Touch Panel	0	Work-in-Progress
2020 Onwards		
Semiconductor ATMP	There is NIL progress in this and there is no strategy for the same. Instrumentality can impact production substantially	
Active Components (Diodes, Transistors, LEDs, etc.)		

Source: ICEA
*** Ratings on a scale of 0–10**

If a product is not exported, RoDTEP is not given to it. However, a final product such as a feature phone or smartphone can claim RoDTEP if the inputs embedded in it were subject to as yet unremitted indirect taxes, which were passed on as costs to the manufacturer. Thus, apart from final product, RoDTEP for some of the key inputs should also be calculated and included in the RoDTEP of the final product. The WTO provision which is the basis for WTO-consistency of RoDTEP, allows this exemption or remission of the indirect tax on inputs within the supply chain of the exported product.

However, this is a chicken and egg situation––if RoDTEP is not given, then there is no incentive (or low incentive) to produce that product at home; if the product is not manufactured at home, then there is not enough data to calculate its RoDTEP. To get over this problem, some reasonable working assumptions need to be made. Only small components––such as APTP, gift box or packaging, chargers, USB cables, batteries or others as shown above in Table 2.4.1 are domestically manufactured. According to mobile phone manufacturers, these abovementioned items account for roughly 20% to 25% of the BOM or roughly 15% to 18% of the total cost of mobiles. Among these items, battery chargers and batteries are exported from India, and in that context the RoDTEP on them can be calculated. A working assumption for proceeding further could be that RoDTEP for all these other small items would be in the same range as the battery charger and hence the same RoDTEP could be used for 15% to 18% of the total inputs for a smartphone. Generally, RoDTEP for small value items tends to be higher than that for large ones, as the share of transport and electricity costs tends to be higher for small value than for large value items. Nonetheless, the overall impact of these items on the aggregate RoDTEP is diminished because of their lower share in costs.

Feedback from the industry indicates that some large value inputs, which account for roughly 15% of the total cost, will be indigenously produced in the next year or two. In that case, i.e. for inputs produced at home thus replacing imported inputs, the power cost would rise by 40% and the transport cost could likely fall. Hence, based on these figures, RoDTEP would be calculated for these inputs and included in the final product.

On the basis of these assumptions, there would be an increase in RoDTEP on average with every percentage rise in indigenization. This estimate can be calculated based on the available data. While this will be an approximate figure, the numeral estimate could be revised when better data becomes available. Similarly, the underlying assumptions will need to be tested as and when actual data becomes available. Till then, the working assumptions based on reasonable estimates would provide fairly robust estimates.

Chapter 3

Introduction: Identifying Embedded Taxes

The Government of India has set up a three-member committee for the calculation of RoDTEP. A similar committee was set up in 2018 to estimate the rates for Rebate of State and Central Taxes and Levies (RoSCTL) for made-up articles and apparel, largely covering similar ground on unremitted taxes as RoDTEP. Given the RoSCTL exercise has already been undertaken, the feedback and learnings from the process will inform the methodology for estimating RoDTEP thus attempting to make it more inclusive and further refined. The committee's intent reportedly is "... not to leave out any event that causes tax content in exports. All the inputs that are not subsumed by the goods and services tax (GST) will be built into the RoDTEP rates". [12]

This report aims to evolve a robust technical methodology to develop a comprehensive approach and clearly identify the indirect taxes which are currently not remitted to exporters. A careful consideration of the supply chain [12] for exports would highlight that certain charges are sometimes not necessarily considered for remission, e.g. charges on air freight or port handling charges. In order to ensure the robustness of methodology, a series of detailed discussions were conducted with firms/exporters involved in the supply chain to clarify the relevant parts of the activities subject to indirect taxes and duties (and their applicable rates) including those which are at present not remitted.

Before delving deeper into the rate determination methodology, it is worth recalling that the WTO Agreement on Subsidies and Countervailing Measures allows the Government to give exemption/reimbursement of "**prior-stage cumulative indirect taxes**" on **goods or services used in the production of exported products ... if the prior stage cumulative indirect taxes are levied on inputs that are consumed in the production of the exported product (making normal allowance for waste)"**.

Thus, the unremitted indirect taxes and duties would also be considered for the "prior-stage" in the supply chain. The estimate of unremitted duties would take account of the cascading or "cumulative indirect taxes".

An important feature of these unremitted duties and taxes is that remission under WTO (and hence RoDTEP) would be allowed for **inputs physically incorporated as well as energy, fuels and oil used in the production process**. Since domestic production of the inputs would involve greater use of energy, fuels and oil compared to import of inputs (which are produced abroad), the base of unremitted duties and taxes for inputs produced domestically would be larger.

Therefore, as the proportion of domestic value-addition increases, i.e. a larger share of the inputs is produced within India, the estimate for RoDTEP for that exported product would increase. Thus, for a firm which is planning to produce a larger part of the supply chain domestically within the next year or two (i.e. it has an ongoing or planned investment to do so), the applicable RoDTEP rate would become higher in the near term. To that extent, since most of the industry is shifting to domestic production of products in India, for example encouraged by the benefit from the Production Linked Incentive (PLI) scheme, the industry rate of RoDTEP in about a couple of years would be higher than the current situation with a relatively smaller share of the inputs produced domestically.

It is crucial that simple methods, comprehensive in approach but easy to understand conceptually, should be used for the RoDTEP exercise. This report attempts to

12. *https://www.financialexpress.com/economy/new-export-scheme-cost-to-far-exceed-niti-aayogs-estimate-of-rs-10000-crore-yr-says-gk-pillai/2063303/*
13. *While international trade terminology is usually "global value chains", the term "supply chain" is being used here because that is the colloquial term used more commonly by industry or exporters.*

undertake the calculation of unremitted taxes and levies on key products in the mobile manufacturing ecosystem. The findings and resulting RoDTEP calculations are based on verified good quality firm level data which brings in a high level of credibility.

Similar to the concept of "disability[14]" adversely affecting exports, a concept which underlies the production linked incentive programme, support through RoDTEP is essential to tackle the problem of higher cost of exports arising out of non-reimbursement of indirect taxes on inputs that several competing economies reimburse to their exporters. Addressing the issue of remitting all indirect taxes on export products would improve competitiveness, increase domestic production and capabilities, and raise exports. This initiative would also be critical as an efficient way of linking up domestic production with the global value chain, thus making it easier for domestic firms to be a larger part of the global value chain.

3.1 Elements of RoDTEP

RoDTEP is a WTO-consistent support plan. The relevant WTO provisions that form the foundation of the RoDTEP calculation exercise have been discussed in Chapter 1. In light of those, the first step to assess the coverage of RoDTEP should be to examine the indirect taxes that are as yet unremitted in India, while also keeping the WTO stipulations in mind. It is also useful to examine the practices of other nations, which have similar schemes in place, to assess whether the coverage considered for RoDTEP is as comprehensive as possible.

The Government of India has identified a list of taxes which can be considered for refund under the RoDTEP scheme. The list, while not comprehensive, includes the following:

Table 3.1.1 Examples from the List of Taxes/Levies circulated by the Government for Information on RoDTEP

	State Duties and Taxes
S1	VAT on fuel used in transportation
S2	VAT on fuel used in generation of captive power
S3	VAT on fuel used in farm sector (for farm products only)
S4	Mandi Tax
S5	Duty on electricity charges
S6	Stamp duty on export documents
S7	Embedded SGST paid on inputs such as pesticides, fertilizers etc. used in production of agriculture goods
S8	Embedded SGST in purchases from unregistered dealers
S9	Embedded SGST on coal used in production of electricity
S10	Embedded SGST on inputs for transport sector
	Central Duties and Taxes
C1	Central Excise duty on fuel used in transportation
C2	Embedded CGST paid on inputs such as pesticides, fertilizer etc. used in production of required raw materials
C3	Embedded CGST in purchases from unregistered dealers
C4	Embedded CGST and Compensation Cess on coal used in production of electricity
C5	Embedded CGST on inputs for transport sector
	Others
D	Any Other Taxes/ Duties/Levies, which are not refunded/ exempted/ reimbursed under any of the prevalent mechanisms, such as Advance Authorization, Drawback and GST refund - Please specify with justification

Source: Ministry of Electronics and IT, Government of India

14. *Disability suffered by Indian exporters vis a vis exporters of competitor nations factors in higher cost of land, capital, electricity, logistics etc.*

Conventionally, the big-ticket items to be considered are indirect taxes on transport and power, and embedded taxes on inputs. As shown in Chapter 2, the coverage of the taxes to be remitted are the inputs consumed in the process of production, i.e. "inputs physically incorporated, energy, fuels and oil used in the production process and catalysts which are consumed in the course of their use to obtain the exported product."

An important point to remember in the coverage of "**inputs physically incorporated**" is that both goods and services are inputs physically incorporated into the product because the attributes of the product reflects a combination of these inputs. In addition, product characteristics or quality of the product that are improved through research or knowledge-based practices which result in a change in the product characteristics are also physically incorporated because the physical nature of the product reflects these attributes.

Yet another aspect of costs that needs to be considered is the **overhead or common costs**, which are costs that are attributable to the inputs physically incorporated. Examples include costs of inventory, and other overhead costs that are attributable to inputs physically integrated.

Thus, indirect taxes on these costs would also be relevant to the RoDTEP exercise. The process of upgrading the product to meet export standards may require certification, training, research and development, sampling and destruction of samples which comes under wastage, visit of foreign consultants and their fees, upgrading of methods and equipment to meet the standards requirements of export markets and other such costs. In several such cases, indirect taxes are imposed on these costs. All such taxes are embedded in the inputs of the product itself as quality of the product is an embedded and physically incorporated input.

The production of Tier I inputs domestically involves certain cascading indirect taxes which are not refunded but passed on to the final producers. These are the **prior stage cumulative indirect taxes on inputs** that are not exported directly. The cost of Tier I inputs to the final assembler increases on account of the payment of these indirect taxes. Logically these taxes should be refunded to the assembler as they have already been passed on by a Tier I input supplier.

While it may not be practicable to go down to more upstream levels of indirect taxes on inputs, the RoDTEP of at least Tier I input suppliers should be included in the calculation as an initial estimate. This will serve two purposes. It will encourage greater domestic production and also help develop an eco-system for Electronics with consequent effects that spread domestically on a wider scale.

3.2
Unbundling Embedded taxes in the Production Process

The most important unremitted indirect taxes in the production process are levied on electricity and transport of inputs and exported products. The incidence of indirect taxes as a percentage of per unit cost of transport and that of per unit cost of electricity would remain the same, irrespective of the product and where it is manufactured.

15. *Conversation with AITWA*

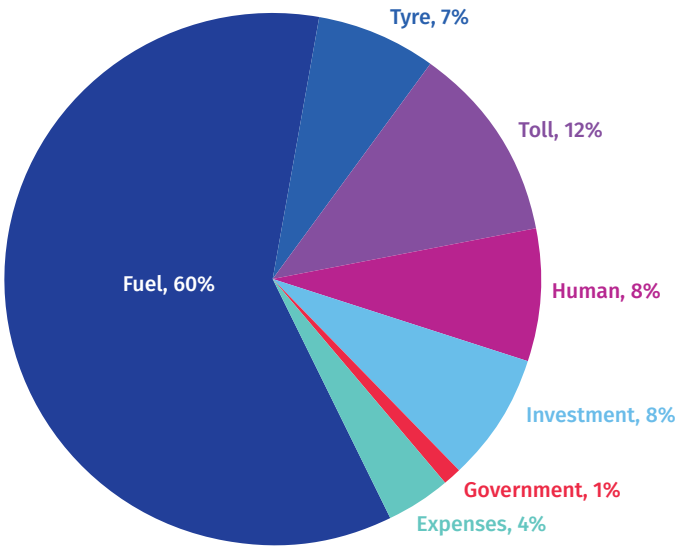

0
TAX%

3.2.1 Unbundling Embedded Indirect Taxes in Transport

The percentage of embedded indirect taxes in per unit cost of transport will remain the same across products no matter which sector is being considered. The proportion of transport costs in total costs will vary across products and across states. This will also vary according to the distance traversed.

According to the All India Transport Workers Association (AITWA), the breakdown of transport costs on road transport is as shown in Figure 3.2.1. Besides this, the users of transport also pay a **GST** of 5%. If, however, the transporters are owners of vehicles they may charge a GST of 12% as they can then use the credit to offset the GST of 28% charged on a vehicle purchase, over a period of 5 years.[15] Most firms however pay a GST of 5% on their transport costs.

Figure 3.2.1: Carriage by Road Index (CRI)



Source: AITWA calculations, as on July 2020

As **Toll charges** are also passed on to the transport user, these must also be refunded. Conventionally there is a difference between a Toll and a road tax. Toll is in the nature of a road user charge which the government charges for building and maintaining a highway. Toll charges or toll taxes are user charges upholding the concept of the "user-pays". Tolls are paid only when a particular facility is used, and the tolls paid cover operating and maintenance costs as well as debt retirement of the facility. It is a form of pay-as-you use. This involves less cross-subsidy amongst road users and makes the incidence of tolls more visible and real to the user. Further, it permits rapid construction, inclusion of adequate operating and maintenance costs in the toll rates and the use of tolls as a form of congestion pricing.

The other form of indirect taxes that are listed under the RoDTEP are those on **tyre oil and lubricants**, which are also passed on to transport users. They are also listed in the RoDTEP format of the Government of India.

In this context, a variation that will be introduced is the state level **VAT rates on fuel**, which varies from one state to another. The VAT charges on fuel in different states is given below in Table 3.2.1. As they vary significantly across states, an average figure can be used. The VAT charges of Delhi could be used as an indicative figure (it is the median value) for the indirect tax on diesel.

Table 3.2.1 VAT rates on Fuel in different States

Statement showing the Actual rates of State taxes/ GST				
State/UT	Petrol	Diesel	SKO (PDS)	Domestic LPG
States	Sales Tax/VAT		GST	
Andaman & Nicobar Islands	6%	6%	5.00%	5.00%
Andhra Pradesh	31% VAT + Rs.4/litre VAT	22.25% VAT + Rs.4/litre VAT		
Arunachal Pradesh	20.00%	12.50%		
Assam	32.66% or Rs.22.63 per litre whichever is higher as VAT	23.66% or Rs.17.45 per litre whichever is higher as VAT		
Bihar	26% or Rs 16.65/Litre whichever is higher (30% Surcharge on VAT as irrecoverable tax)	19% or Rs 12.33/Litre whichever is higher (30% Surcharge on VAT as irrecoverable tax)		
Chandigarh	Rs.10/KL cess + 22.45% or Rs.12.58/Litre whichever is higher	Rs.10/KL cess + 14.02% or Rs.7.63/Litre whichever is higher		
Chhattisgarh	25% VAT + Rs.2/litre VAT	25% VAT + Rs.1/litre VAT		
Dadra and Nagar Haveli and Daman and Diu	20% VAT	20% VAT		
Delhi	30% VAT	Rs.250/KL air ambiance charges + 16.75% VAT		
Goa	25% VAT + 0.5% Green cess	22% VAT + 0.5% Green cess		
Gujarat	20.1% VAT + 4% Cess on Town Rate & VAT	20.2% VAT + 4 % Cess on Town Rate & VAT		
Haryana	25% or Rs.15.20/litre whichever is higher as VAT+5% additional tax on VAT	16.40% VAT or Rs.9.20/litre whichever is higher as VAT+5% additional tax on VAT		
Himachal Pradesh	25% or Rs 15.50/Litre- whichever is higher	14% or Rs 9.00/Litre- whichever is higher		
Jammu & Kashmir	24% MST + Rs.5/Litre employment cess, Reduction of Rs.0.50/Litre	16% MST + Rs.1.50/Litre employment cess		
Jharkhand	22% on the sale price or Rs. 17.00 per litre, whichever is higher + Cess of Rs 1.00 per Ltr	22% on the sale price or Rs. 12.50 per litre, whichever is higher + Cess of Rs 1.00 per Ltr		
Karnataka	35% sales tax	24% sales tax		
Kerala	30.08% sales tax+ Rs.1/litre additional sales tax + 1% cess	22.76% sales tax+ Rs.1/litre additional sales tax + 1% cess		
Laddakh	24% MST + Rs.5/Litre employment cess, Reduction of Rs.2.5/Litre	16% MST + Rs.1/Litre employment cess, Reduction of Rs.0.50/Litre		
Lakshadweep	Nil	Nil		
Madhya Pradesh	33% VAT + Rs.4.5/litre VAT + 1% Cess	23% VAT + Rs.3/litre VAT + 1% cess		
Maharashtra – Mumbai, Thane & Navi Mumbai	26% VAT + Rs.10.12/Litre additional tax	24% VAT + Rs.3.00/Litre additional tax		
Maharashtra (Rest of State)	25% VAT + Rs.10.12/Litre additional tax	21% VAT + Rs.3.00/Litre additional tax		

Statement showing the Actual rates of State taxes/ GST				
State/UT	Petrol	Diesel	SKO (PDS)	Domestic LPG
States	Sales Tax/VAT		GST	
Manipur	36.50% VAT	22.50% VAT	5.00%	5.00%
Meghalaya	31% or Rs17.60/Litre- whichever is higher (2% surcharge leviable only on advalorem tax)	22.5% or Rs12.50/Litre- whichever is higher (2% surcharge leviable only on advalorem tax)		
Mizoram	25% VAT	14.5% VAT		
Nagaland	25.00% VAT + 5% surcharge + Rs.2.00/Litre as road maintenance cess + Rs.6.00/ Litre as COVID cess	14.50% VAT + 5% surcharge + Rs.2.00/Litre as road maintenance cess + Rs.5.00/ Litre as COVID cess		
Odisha	32% VAT	28% VAT		
Puducherry	28% VAT	21.80% VAT		
Punjab	Rs.2050/KL (cess) + Rs.0.10 per Litre (Urban Transport Fund) + 24.79% VAT + 10% additional tax on VAT	Rs.1050/KL (cess) + Rs.0.10 per Litre (Urban Transport Fund) + 15.94% VAT + 10% additional tax on VAT		
Rajasthan	38% VAT + Rs 1500/KL road development cess	28% VAT + Rs.1750/KL road development cess		
Sikkim	25.25% VAT + Rs.3000/KL cess	14.75% VAT + Rs.2500/KL cess		
Tamil Nadu	15% + Rs.13.02 per litre	11% + Rs.9.62 per litre		
Telangana	35.20% VAT	27% VAT		
Tripura	25% VAT + 3% Tripura Road Development Cess	16.50% VAT + 3% Tripura Road Development Cess		
Uttar Pradesh	26.80% or Rs 18.74/Litre whichever is higher	17.48% or Rs 10.41/Litre whichever is higher		
Uttarakhand	25% or Rs 19 Per Ltr whichever is greater	17.48% or Rs Rs 10.41 Per Ltr whichever is greater		
West Bengal	25% or Rs.13.12/litre whichever is higher as sales tax + Rs.1000/ KL cess - Rs.17/KL exemption (20% Additional tax on VAT as irrecoverable tax)	17% or Rs.7.70/litre whichever is higher as sales tax + Rs 1000/ KL cess – Rs 290/KL sales tax rebate (20% Additional tax on VAT as irrecoverable tax)		
(As per details provided by OMCs)				

1. For Petrol & Diesel, VAT/Sales Tax at applicable rates is also levied on Dealer's commission in Arunachal Pradesh, Delhi, Gujarat, Haryana, Madhya Pradesh, Punjab, Rajasthan Chandigarh, Puducherry, Andaman & Nicobar, Meghalaya, Dadar Nagar Haveli and Daman & Diu.

Source: Petroleum Planning and Analysis Cell, Table posted on 1-08-2020

The breakdown of the cost of fuel in Delhi was shown by the All India Transport Workers Association (AITWA) to be as follows. The first column refers to petrol and the second column to diesel. Table 3.2.2 shows the total indirect taxes on diesel to be around 60% of the cost of diesel. The initial freight cost and logistics and the GST paid on it is not included. In any case it is likely to be negligible.

Table 3.2.2 Indirect taxes on Diesel

Refining Processing + Refinery Margins + OMC Margin + Freight Cost, Logistics	**INR 5.1/ litre**	**INR 8.24/ litre**
Fuel price after processing (ready to send to petrol pump)	**INR 25.21/ litre**	**INR 28.35/ litre**
Central Government Taxes & Dealer Commission		
Additional: Excise Duty + Road Cess as charged by Central Government	**INR 32.98/ litre on petrol**	**INR 31.83 litre on diesel**
Commission to petrol pump dealers	**INR 3.68/ litre**	**INR 2.58/litre**
Fuel Cost before VAT		
Cost as on August 1, 2020	**INR 61.87/ litre**	**INR 62.76/ litre**
VAT Calculation		
Additional: VAT (30% on petrol and 16.75% on diesel. Additional cess on diesel. (August 1, 2020)	**INR 18.56/ litre on petrol**	**INR 10.8/ litre on diesel**
Final Retail Prices as on August 1, 2020	**INR 80.43/ litre**	**INR 73.56/ litre**

Source: Figures provided by AITWA

3.2.2 Unbundling Indirect taxes in Electricity

Taxes on electricity are paid at various points. At the point of consumption or usage the factory owner pays between 5-20% VAT depending on the state in which the factory is located. [17] The average tax per unit of electricity consumed in the states where the mobile is manufactured, is around 10%. This is charged by the distributor who supplies power to the end user. There is on an average a 10-15% percent transmission loss. This implies that the taxes paid by the user is on a base which is 10-15% lower than that purchased by the distribution company. However, the cost of the transmission losses are also passed on to the end user by the distribution company, which implies that all the unremitted taxes on inputs that are passed on include the inputs for the power that is lost in transmission. [18]

The final price to be paid by the end users is set by the electricity regulatory commissions of the state. On an average the commercial rates are around INR 7.50.

A power generation company such as NTPC does not pay any indirect taxes to the government such as GST as yet but it indirectly pays substantial indirect taxes on coal. The estimates calculated here is based on the assumption that all the power consumed by the manufacturers is of thermal origin. The taxes being calculated here are for thermal power usage by manufacturing units. They could be higher or lower for other sources of power generation. The taxes that a power company pays on coal can be classified as follows:

17. *https://www.bijlibachao.com/electricity-bill/electricity-duty-and-tax-on-electricity-bills-in-india.html*
18. *https://www.bsesdelhi.com/documents/73527/75014/BYPL_TARIFF_ORDER_2019_20.pdf/92414ea2-1b68-d98d-f8ae-0ba9d039b8d9*

1. All indirect taxes paid by coal mining companies and added on to the price of coal, which is realised from the generator of power. These include taxes paid by way of clean energy cess, central excise duty, stowing excise duty, taxes on basic railway freight and GST paid on it, development surcharge, service tax or VAT, and Central sales tax. These taxes together accounts for roughly 67.73% as the total indirect tax component of coal. [19] The taxes include a 40% clean energy cess, a central excise duty of 6.18%, a stowing excise duty of 2.35%, a GST of 5%, a forest adjustment fee of 1.5%, and a forest permit fee of 1% and a service tax of 3.7% on loading and unloading on railway freight. [20] In addition the coal companies pay the railways a GST of 5%+3% in terms of dynamic pricing for the freight.

2. In terms of coal conversion to power, one unit of power uses about 0.60-0.70 kg of coal. The power companies use roughly 80% domestic coal and 20% imported coal. Domestic coal costs INR 1.10 per kg whereas imported coal costs roughly INR 3.20 per Kg to the power companies. Power generation using this ratio of coal costs roughly Rs.3.08 per unit. Hence using an average of 0.65 Kgs of coal per unit of power, coal costs roughly 33% per unit thermal power. [21] As power generation cost is roughly 41% of the price paid by commercial users, the cost of coal per unit price is roughly 13.5% of per unit price of commercial user. [22]

3. Apart from the GST of 5% +3% (dynamic cost adjustment fee) paid to the railways by coal companies, the freight cost includes indirect taxes paid on energy costs. The percentage of diesel costs and electricity cost of railways per unit freight is provided in the Table 3.2.3. This is as a percentage cost of freight to haul the wagons to transport coal from the mines to the power stations. [23]

Table 3.2.3: Percent of Different items per unit freight cost of Railways

MAINTENANCE					LINE HAUL					
Item	Documentation	Other Terminal Services	Provision & Maintenance	Diesel	Electricity	TPT	Track	Signal	Overheads	Total
CR	0.08	12.28	7.09	13.19	22.45	7.95	13.12	3.11	20.73	100.00
ER	0.12	11.66	12.16	8.51	10.70	9.22	9.06	1.10	36.23	100.00
ECR	0.04	15.13	13.81	10.63	16.90	9.09	10.39	1.87	19.93	100.00
ECOR	0.02	10.00	12.05	21.10	12.70	8.87	15.22	1.59	14.87	100.00
NR	0.24	10.24	11.23	12.21	9.19	9.74	18.36	2.63	20.16	100.00
NCR	0.91	14.96	12.80	8.06	24.79	4.85	9.87	4.36	18.74	100.00
NER	0.02	13.41	4.78	19.13	-	18.71	16.81	3.36	23.78	100.00
NFR	0.04	3.13	7.98	17.87	-	11.30	32.91	1.16	23.60	100.00
NWR	0.07	5.12	0.17	36.06	-	12.00	12.08	1.12	23.04	100.00
SR	0.12	11.75	6.46	10.57	20.25	7.89	10.04	1.72	24.01	100.00
SCR	0.03	4.63	10.77	24.32	17.30	9.29	14.34	1.18	18.06	100.00
SER	0.06	19.85	8.85	4.03	17.92	9.67	10.88	1.43	20.82	100.00
SECR	0.02	9.41	12.71	0.42	27.33	11.84	12.03	1.00	18.20	100.00
SWR	0.06	3.07	0.01	40.40	2.21	6.23	18.00	0.60	14.28	100.00
WR	0.04	4.38	0.83	14.00	21.34	12.80	14.19	2.12	20.14	100.00
WCR	0.03	4.05	7.30	23.00	21.36	11.01	12.10	2.49	11.89	100.00
All Rlys	0.11	0.80	10.21	15.02	10.00	9.72	14.53	1.90	21.43	100.00

Source: Railways and Coal, 2019, Brookings India study. Railway Handbook, 2019

19. *Calculated from the paper Coal taxes and subsidies, pdf, 2019, ERIA (2019), 'Taxes and Subsidies in the Coal Sector', in Phoumin, H., S. Kimura and R. G (eds.), Energy Pricing in India: A Study on Taxes and Subsidies. ERIA Research Project Report FY2018 no.15, Jakarta: ERIA, pp.67-77.*
20. *Ibid.*
21. *The Cost of Power Generation The current and future competitiveness of renewable and traditional technologies, By Paul Breeze, 2019.*
22. *Railways and Coal, 2019, Brookings India study. Railway Handbook, 2019.*
23. *Railways and Coal, 2019, Brookings India study. Railway Handbook, 2019.*

4. It is to be noted that coal freight cost is almost as much as coal cost. Depending on the distance travelled freight accounts for roughly 45-62% or average of 53.5% of the delivered price of domestic coal and roughly 9-20% or 14.5% on an average of the delivered price of imported coal. [24] Working backwards, the estimated freight cost of coal per unit of power for domestic coal is around 34% of per unit of electricity [25] and around 2% for imported coal per unit electricity. In terms of prices paid by commercial users using the same value as shown in point 2, transport of domestic coal accounts for roughly 13.5% of unit price of electricity for domestic coal. For imported coal, transport costs account for 0.82% of the total unit price of electricity. Imported coal also pays a coal compensation cess of 40%. It is to be noted that 95% of the coal is transported by rail and 5% by road. The elements of indirect taxes on road transport have been enumerated below.

3.3 Refund Potential of Indirect taxes and levies as per WTO

Based on all these figures and arguments enumerated above, the indirect taxes per unit of transport would be calculated as shown in Table 3.3.1. The explanation of the calculations is provided in the footnotes mentioned in the tables below.

Table 3.3.1 Total indirect taxes per unit of road transport

Items	% of total costs of transport	Indirect taxes as % per unit	Total incidence of indirect taxes per unit transport
Total transport	100	GST 5%	5
Fuel	60 [27]	60 [27]	36
Tyres, tubes etc	7 [28]	GST at 18%	1.26
Total			42.26

Source: Author's Calculation

The indirect taxes on power are somewhat more complicated as shown by the elements above. Table 3.3.2 shows the indirect taxes per unit of thermal power generated in India.

24. *Coal taxes and Subsidies, 2019, op.cit*
25. *State run Power companies hit by huge transport costs, Business standard, 2019*
26. *See figure 3.2.1 above*
27. *See Table 3.2.2 for calculation of indirect taxes. The total indirect taxes come to about 60%*
28. *See Figure 3.2.1 above*

Table 3.3.2 Indirect taxes per unit of Thermal Power

Items	% of total costs of electricity Generation	Indirect taxes as % per unit	Total incidence of indirect taxes per unit
Total Power	100	10 [29]	10
Transmission and distribution losses	15	10	1.5
Taxes arising from use of coal in thermal power			
Domestic coal cost	13.5*80 [30]	68 [31]	9.9
Increased use of domestic coal because of transmission and distribution losses of electricity	2.02*80 [32]	68	1.1
Imported coal cost	13.5*20 [33]	48 [34]	1.3
Increased use of imported coal because of transmission losses	2.02*20	48	0.19
Transport of domestic and imported coal by road	14.33*5 [35]	42.26 [36]	0.30
Increased transport cost because of transmission losses and greater use of coal	2.15*5	42.26	0.05
Total transport cost for NTPC paid to Railways per unit power	16.48*95 [37]	5% GST	0.78
Energy cost of freight using railways for domestic and imported coal	16.48 [38]		
Cost of electricity per unit freight by railways	16.48*95*20	10% tax as paid by commercial consumers	1.96
Cost of coal used to generate electricity per unit freight by railways	16.48*95*20*33 [39]	68	0.70
Cost of diesel used to generate energy per unit freight by railways	16.48*95*25 [40]	60	2.22
Cost of diesel used for road transport of coal	16.48*5*60 [41]	60	0.30
Total indirect taxes			30.3
Captive Power			
Diesel genset air pollution tax	**100**	**3** [42]	**3**
Fuel [43]	**80**	**60**	**48**
Total			**51**

Source: Data from NTPC

The per unit indirect tax rate will remain stable for all products and could be used for remission on final products as well as the inputs embedded in them. It is to be noted that State VAT and other taxes may differ widely. For example, fuel and electricity VAT is higher in AP and Tamil Nadu. The calculations above have taken an average rate and hence the actual level of indirect taxes may vary by as much as 5% above or below this rate given the level of indirect taxes.

29. *This is an average of the taxes paid in Electronics producing states.*
30. *According to NTPC the best efficiency of power is obtained from 80% domestic coal and 20% imported coal. See NTPC power generation costs. Last year 22.4% of the total coal consumed was imported. The cost of coal per unit of power is based on the following calculation. The cost of domestic coal is INR1100 per tonne and that of imported coal is roughly INR3200 per tonne. Using this proportion and the fact that each KW of power needs roughly 0.65 Kg of coal the cost of coal per unit power is = (0.65*1.1*0.8+0.65*3.2*0.2) /3.08=33% of total cost. It is to be noted that this is the share in the cost of production of power not on the cost of power paid by the consumer. So, if the cost of production is 3.08 and the price paid by the commercial user INR 7.5, then coal cost as a proportion of total cost of the commercial user is around 13.5%.*
31. *Indirect taxes on coal.*
32. *15% transmission losses implied 15% more coal would be used. This works out to a 15% increase on 13.5% which is the share of coal per unit price of electricity paid by final users. This works out to 2.02%*
33. *All indirect taxes would be paid by imported inputs.*
34. *Indirect taxes on imported coal. This is the coal compensation cess imposed on all coal of 40% and the freight tax of 8%.*
35. *5% of coal transported by the coal companies to power companies is by road. On this, as shown above the coal companies pay 5% GST. The total cost of transport of coal as a percentage of price paid is 14.3%.*
36. *Total indirect taxes calculated on road transport. See above*
37. *16.48% is inclusive of transmission and distribution losses of 15%. As 95% of the coal is transported by rail this figure is multiplied by 95%.*
38. *Again, total cost of transport of coal is 14.3% of final price, including the extra freight required for transmission and distribution losses this amounts to 16.48% per unit price of electricity paid by final consumer.*
39. *The figure for freight is 16.48 as shown in Fn 19. Of this total 95% is transported by railways. Of the total Freight cost, on an average the electricity costs of railways in states which produce Electronics is roughly 20%. See Annex for railway table. Coal used per unit electricity is 33% of total cost and on that the tax is 68%.*
40. *The cost of diesel per unit railway freight in Electronics producing states is 25%. As shown earlier, the indirect costs on diesel was 60%.*
41. *Diesel costs as shown earlier was roughly 60% of road transport costs. The indirect taxes on diesel is 60%.*
42. *Information provided by producers.*
43. *Information given by firms using gensets.*

3.4
Practices from other countries

For more comprehensive coverage of indirect taxes to be remitted on exports, it is useful to examine the practices of other nations. Besides the indirect taxes mentioned above, some countries exempt other taxes as well. Some examples are:

Argentina exempts input taxes on advertising, business gifts, purchase/lease or hire of a car, up to a threshold of ARS4,200 (except for cabs), business entertainment, and mobile phones. [44]

In Austria for example, items for which input tax is deductible are accommodation, mobile phone costs, books, small business gifts, if allowed for direct tax purposes (but gifts are subject to output VAT if they exceed a value of EUR40), purchase, lease, hire, maintenance and fuel for vans and trucks and certain cars used for business purposes [45] without CO2 emission, entertainment of business partners (restaurant expenses), if predominantly for marketing purposes, taxis, and business travel if predominantly for exports.

In Bulgaria, the input taxes which can be refunded on exports include purchase, lease and hire of vans and trucks and other vehicles, which do not qualify as passenger cars, lease and hire of cars, fuel for vans, trucks, leased and hired cars, mobile phones, conferences and seminars, advertising, donations of foodstuff to food banks subject to a number of specific conditions being met. [46]

In Canada input taxes which are eligible for input tax credits include hotel accommodation, attending conferences and seminars, purchase, lease or hire of cars, vans or trucks, subject to certain limits, maintenance and fuel for cars, vans or trucks, parking, and mobile phones. [47]

In Costa Rica the input taxes which are deductible include taxes on insurance premiums and gifts as well as packaging. [48]

In Denmark examples of items for which input tax is deductible (if related to a taxable business use) are 100% of hotel accommodation, if strictly for business purposes, 25% of restaurant services, if strictly for business purposes, books, long-term lease of cars used for a business (a proportion), attendance at conferences, seminars and exhibitions and 50% of home telephone bill.[49]

Table 3.4.1 Examples of indirect taxes refunded as input taxes to exporters

Countries	Advertising	Mobile Phones	Business Travel Expenses	Purchase, lease and hire of a car/ van/ truck	Fuel in Transport	Accommodation for clients
ASEAN						
Indonesia	✓		✓	✓	✓	
Vietnam				✓	✓	
EAST ASIA						
Japan	✓	✓	✓			✓
EUROPEAN UNION						
France	✓			✓	✓	✓
Finland	✓				✓	✓
Germany	✓			✓		✓
Italy		✓		✓	✓	
Netherlands	✓			✓	✓	
Russian Federation	✓		✓	✓	✓	✓
UK					✓	✓
NORTH & LATIN AMERICA						
Canada		✓		✓	✓	✓
Mexico		✓	✓	✓		✓
AFRICA						
Tanzania	✓					
SOUTH AMERICA						
Argentina	✓	✓	✓	✓		
AUSTRALIA						
Australia	✓	✓		✓	✓	

Source: EY, 2019 [50]

In addition, the practices of some other countries of refunding indirect taxes are included in Annex 1 to this report.

44. *https://www.ey.com/Publication/vwLUAssets/ey-2019-Worldwide-VAT-GST-and-Sales-Tax-Guide/$FILE/ey-2019-Worldwide-VAT-GST-and-Sales-Tax-Guide.PDF*
45. *Ibid*
46. *Ibid*
47. *Ibid*
48. *Ibid*
49. *Ibid*
50. *EY-2019-Worldwide-VAT-GST-and-Sales-Tax-Guide (2).PDF ad*

3.5 Conclusion

In light of the above, it can be concluded that:

- Based on credible inputs from the industry, the big-ticket items to be considered in the calculation of RoDTEP rates are indirect taxes on transport and power, and embedded taxes on inputs.
- While transport and power are the traditional items in indirect tax refunds, several countries also consider other service taxes as input taxes for refund for businesses. These taxes can be pro-rated for exports but are unlikely to be very high.
- While the report attempts a comprehensive unbundling of indirect taxes in domestic production, it is important to note that a robust review process needs to be accounted for. As local value addition and manufacturing increases, the inputs would involve greater use of energy, fuels and oil compared to import of inputs (which are produced abroad), and the base of unremitted duties and taxes for inputs produced domestically would be larger. Therefore, as the proportion of domestic value-addition increases, i.e. a larger share of the inputs is produced within India, the estimate for RoDTEP for that exported product would increase.

Chapter 4

4
Introduction: RodTEP Rates

RoDTEP scheme aims to reimburse the indirect taxes and duties incurred by exporters such as local taxes, coal cess, mandi tax, electricity duties and fuel used for transportation, which are not getting exempted or refunded for exports under any other existing scheme like Duty Drawback, GST refunds, central/state government exemptions, etc. The indirect taxes remitted under RoDTEP would be provided as a percentage of the Freight on Board (FOB) value of exports. The calculation of the RoDTEP rate by an individual industry association has however been based on the cost of production.

The Department of Revenue has constituted a Drawback Committee to hold consultation meetings with Export Promotion Councils as well as other stakeholders for determination of rates of remission under the RoDTEP scheme. The data provided to the Committee has to be supported by copies of tax invoices of inputs used, shipping bills of export product, state government notifications regarding taxes/levies like electricity duty, mandi tax etc. Once collected from the exporters, industry associations shall submit the data to the committee. Data submitted should pertain to at least five units for each export product for it to be representative of the industry. The units should be carefully selected from amongst the small, medium as well as large manufacturer exporters. This exercise has to be completed earnestly as RoDTEP scheme is set to replace the popular Merchandise Export from India Scheme (MEIS) by December 2020. The sequence of introduction of the scheme across sectors and prioritization of the sectors to be covered will be decided by the Department of Commerce in consultation with the Department of Revenue.

4.1
Methodology adopted, scope and limitations of the Exercise

For estimating RoDTEP in this Report, a questionnaire was initially developed for sending to manufacturing units. The questionnaire is shown in Annex 2 of this report. The questions were revised and made more focused in consultation with firms and experts. Several meetings were held with firms, experts and government officials to clarify the scope of the exercise to ensure that refunds claimed either under GST or those which are covered under duty drawback were not included in the exercise. The list of products covered is extensive, including many items with small value of production or exports. As elaborated in Chapter 2, the various products covered in this chapter were identified in terms of four criteria for prioritization. [51] Based on that categorization, certain products are more relevant for determination of the remission rates (Table 4.1.1 below).

51. *Products with a large export base at present or in the near future, those with a large potential for major increase in exports from India, products for which a major part of global export capacity could be shifted to India, and products that will increase domestic technological capabilities and strengthen/improve the domestic ecosystem.*

Table 4.1.1 Products meeting at least three of the four criteria embodying major objectives for exports and domestic production

Type of Product	Products Meeting All Four Criteria	Products Meeting Three of the Four Criteria	Products Meeting Two of the Four Criteria
Finished Products	Mobile phones (Feature phone/Smartphone)	Earphones Laptops, Tablets	Smart Watches, Bluetooth Speakers, Wireless Headsets
Sub-Assemblies	Power Adapters/Chargers for: Mobiles, PCs, Laptops, Tablets, Watches, Speakers, PCBA	Battery packs	Mechanics (Enclosures)
Components			Coils

A comprehensive RoDTEP exercise would become very detailed due to the sheer number of products and the fact that the estimate would involve looking at prior-stage cumulative taxes for the inputs in the supply chain. Therefore, a very significant beginning in calculation of RoDTEP can be made by considering those products which account for a relatively large portion of the total current and potential exports of Electronics products, given that the focus of RoDTEP is on exports. [52]

Table 4.1.2 Components of a BOM in smart phones

Sr. No.	Sub Assemblies of Mobile Phone	% of BoM
1	Gift Box	1%
2	APTP	10%
3	Charger	2%
4	PCBA	45%
5	Battery	4%
6	Mechanics	9%
7	Display Assembly	14%
8	Mic, Receiver	1%
9	Connectors	1%
10	Ringer Vibrator Motor	1%
11	Camera Module	12%
Total		100%

Source: ICEA

Among the product list given in Table 2.2.5, only three product categories had an export share above 5% of total in 2019-20 (see Table 4.1.3). With the expected increase in exports of mobile phones and chargers, these products will account for over two-thirds of Electronics exports from India.[53] This chapter has thus focused on derivation of the RoDTEP rates for the top two prominent Electronics products for exports, namely battery chargers and mobile phones. In addition, PCBAs are also included in the list of RoDTEP calculations as they account for nearly 45% of the total BOM costs (see Table 4.1.2). Some other products on which data was made available by the firms have also been included in the calculations. Some working assumptions have been made for inputs on which data was not made available at the time of writing this report.

RoDTEP rate is estimated for one other product as well, i.e. “enclosures”. The reason is to illustrate an important point. Producers in India have begun to produce enclosures within India. By 2021, production of these products will be far more established. Until recently, enclosures were imported and the only elements of RoDTEP that were relevant for them as an input was the indirect tax on transport from the airport to the factory. With enclosures being produced domestically, the transport component is somewhat higher, and the indirect tax related to power used for production of enclosures needs to be added as well. This results in a RoDTEP estimate higher than that arising if the product was an imported input. Therefore, as domestic production increases, the estimate of RoDTEP would also increase. Furthermore, if domestic firms are tangibly planning or have begun the production of some inputs in the supply chain, then the relevant estimate will be inclusive of the RoDTEP on such domestic products.

52. *The products selected have a significant share also in domestic production of Electronics.*
53. *For example, the National Policy on Electronics 2019 states that by 2025, exports of mobile phones would be USD110 billion, up from USD3.84 billion in 2019-20.*

Table 4.1.3 Product Categories with Export Share Above 5% of Total Electronics Exports (2019-20)

Product Category	Export Share in Total Electronics Exports in 2019-20
Mobile phones (Feature phone/Smartphone)	52.2%
Power Adapters/Chargers for: Mobiles, PCs, laptops, Tablets, Watches, Speakers	6.4%
Boards etc. for a Voltage<=1000 volts	6.1%

Source: ICEA

The selection of battery chargers and mobile phone to estimate RoDTEP covers two products that account for almost two-thirds of the total Electronics exports from India. In addition, they represent two products substantially different in terms of the factors which impact the RoDTEP rate. One is a relatively high value product with a relatively small domestic value addition at present (mobile phone). The other is a small product with relatively larger domestic share in value added (battery chargers).

4.2 RoDTEP Estimates

4.2.1 RoDTEP - Battery Chargers

The figures calculated in chapter 3 for indirect taxes on transport and power or electricity are used in the estimation of RoDTEP here. In addition to this information, the table considers the share of transport and power costs in total cost as provided by the information given by the firm in Annex 3.

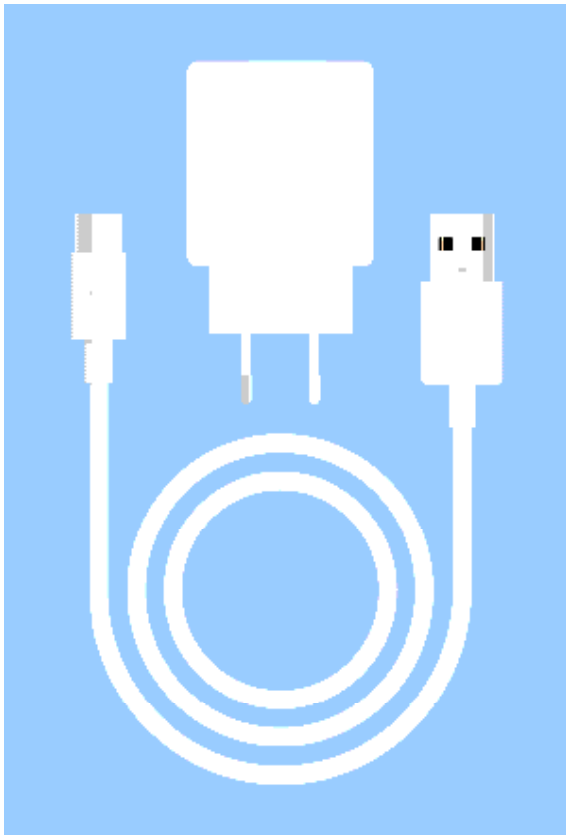


Table 4.2.1 RoDTEP for Battery Chargers [53]

(1) Categories	(2) Percentage of total costs	(3) Embedded Indirect Taxes (%)	T4) RODTEP (%) Column (2) multiplied by column (3)
Transport			
1.a Total	3		
1.a.i Road transport	3	42.26	1.27
Power			
2.1Total	1.5		
2.1.i Grid Power usage	1.41 [54]	30.3	0.42
2.1.ii Captive power total	0.09	51.00	0.05
Embedded Inputs (i.e. prior stage indirect taxes)			
3.1 Domestically produced	28 [55]		
3.1.i Transport costs	28*3 [56]	42.26	0.36
3.1.ii Power costs from the grid	28*1.41 [57]	30.3	0.12
3.1.iii Captive power costs	28*0.09 [58]	51	0.13
Services inputs incorporated			
4.1 Costs to upgrade the product to export quality	2.7 [59]	18	0.5
4.2 Building maintenance cost to meet requisite product standards	3	18	0.54
4.3 Any other			
TOTAL			3.4%

Source: Author's calculations based on data provided by companies

The RoDTEP estimate for battery chargers is 3.4%.

These estimates, however, do not include several other taxes which are allowed as input tax refund in other countries (See Section 3.4). Inclusion of those taxes would result in a higher estimate for RoDTEP. If these additional taxes are not considered at present, the estimates above would be floor rate of RoDTEP. This could be considered as a starting point for battery chargers as well as other small parts of the supply chain.

53. *See Annex 3 for datasheets given by firms producing battery chargers*
54. *As per data given by a major firm producing for battery chargers.*
55. *As above.*
56. *Taking the proportion of transport to total costs to be the same as that of final product. This is likely to give an underestimate of the share of transport costs because this share is likely to be higher for small low value parts.*
57. *Taking power as a proportion of total costs is exactly the same as the final product.*
58. *Taking the captive power cost as a proportion of total cost is exactly the same as final product.*
59. *As per data provided by a major producer of battery charger, roughly 40% of the inputs are procured locally. BOM is 70% of the total cost, thus locally procured inputs are 28% of total costs (i.e. 40% of 70%).*

4.2.2 RoDTEP- Enclosures

The domestic production of these products has begun, and they will be produced in a significantly large volume by 2021. The firms involved in production of enclosures have provided the relevant cost information on them for estimating RoDTEP.

The relevant items for estimating RoDTEP for enclosures are inbound cost of transport of material to make enclosures, cost of electricity, and one part of GST which is not refunded. Using the indirect tax estimates corresponding to transport and power in Chapter 3, the rate of RoDTEP for enclosures is shown in Table 4.2.2.

Table 4.2.2 RoDTEP for Enclosures

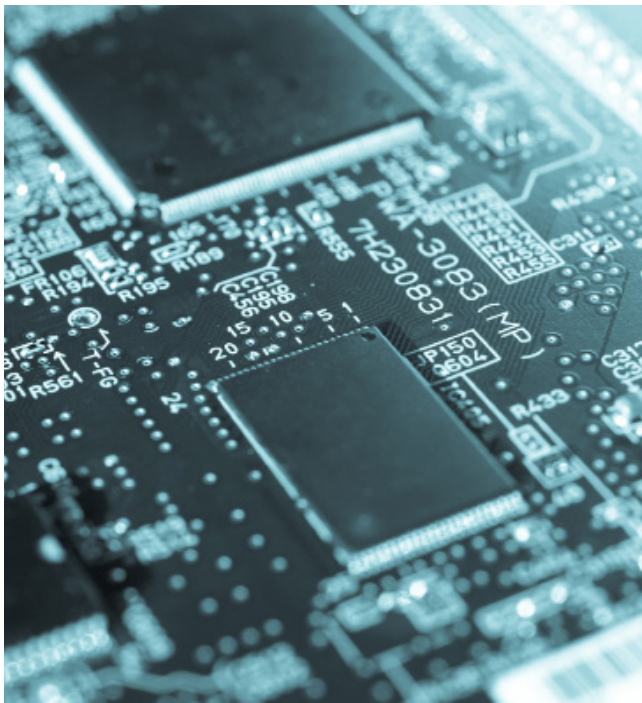
Item	% of total cost	% indirect taxes	RoDTEP (%) (due to inputs)
Inbound Transport	0.38 [60]	42.26	0.16
Outbound Transport			
Electricity cost	2.1 [61]	30.3	0.63
Captive power cost	0.05 [62]	51	0.03
GST not refunded			0.45
Total			1.27

Source: Based on data provided by companies

The RoDTEP estimate for enclosures is 1.27%.

4.2.3 RoDTEP - PCB and PCBA

While PCBA accounts for 45% of the BoM costs in a smartphone, PCB may account for upto 5 - 6% of the BoM cost. Information on PCB was accessed through industry associations by ICEA. Using this evidence and based on the information in Chapter 3, Table 4.2.3 provides data on RoDTEP for PCB.



60. *As per the data supplied. See annex 4*
61. *Information provided by Companies*
62. *Information provided by companies*

Table 4.2.3 RoDTEP for PCB

SN	Item	
1	HSN Code of the Exported Product at 8 Digit (as in Format R1)	85340000
2	Unit Quantity Code (UQC) of Exported Product	SQM
3	Description of the Export Product	Printed Circuit Boards
4	Period of Export	01.01.2019 to 30.06.2019
	FOB value of price per unit export	INR 12,225
5	Fuel Used in Transportation (Inbound Transport)	
5A	Total Transportation Cost actually incurred with respect to process of procuring raw materials, consumables, spares for manufacture of above-mentioned export product (Inbound transportation)	INR 84,31,203/-
5B	Component of State VAT and Central Excise Duty on fuel used in the Transportation Cost (out of 5A above) - for Inbound Transportation, in %	50%
5C	Total transportation cost incurred for exported products per UQC for Inbound Transportation	INR 30.85/-
5D	Total transportation cost on account of State VAT and Central Excise Duty on fuel used in Inbound Transportation per UQC of the Exported Product in INR	INR 15.42/-
6	Fuel Used in Transport (Outbound Transport)	
6A	Total Transportation Cost actually incurred with respect to process of transporting exported product from factory to the gateway port (Out bound transportation)	INR 1,11,60,114/-
6B	Component of State VAT and Central Excise Duty on fuel used in the Transportation Cost (out of 6A above) - for out bound Transportation, in %age	50% [63]
6C	Total transportation cost incurred for exported products per UQC for outbound Transportation	INR 61.78
6D	Total transportation cost on account of State VAT and Central Excise Duty on fuel used in Outbound Transportation per UQC of the Exported Product in INR	INR 30.89
7	Electricity Duty	
7A	Total Electricity consumed in units (kWh) for manufacture of the exported product	76,80,799 (kWh)
7B	Rate of Electricity Duty per kWh	9%
7C	Total Electricity Duty paid for manufacture of exported products	INR1,68,18,435
7D	Total Electricity Duty paid for manufacture of 1 UQC of the exported product	INR 93.10
	Indirect taxes per unit power [64]	30.3 percent
7E	Total indirect taxes paid per unit of manufacture of 1 UQC of exported product	INR 406.5 [65]
8	Stamp Duty	
8A	Stamp Duty paid for relevant Export Documents (in INR)	INR 15,790/-
8B	Type of Transaction for which Stamp Duty has been paid (please specify) - please do not include stamp duty paid of registration of land and lease of immoveable property	For Bond Undertaking
8C	Total stamp duty paid per UQC of the exported product	INR 0.09
9	State VAT on fuel used in generation of captive power	
9A	Units of power generated by captive power through DG Sets for manufacturing process	95,810 kWh
9B	Total cost of Fuel used to generate the captive power through DG Sets	INR 6,91,965/-

63. *As was stated earlier State taxes on fuel vary. The figure of 50% versus 42.23% used for earlier calculations of RODTEP is because of this variation across states.*
64. *This is based on Chapter 3*
65. *If 9% is INR 93.10 then 30.3% would be approximately INR 313.00.*

SN	Item	
10	Embedded CGST/ SGST on inputs used in the Transport Sector	
10A	Total Transportation Cost Including Inbound Transportation and Outbound Transportation (5A + 5B)	INR 1,95,91,317
	Percent of total transport costs attributable to tyres, lube oil, spares etc	7%
	Total in INR	INR 1,37,13,92
10B	Estimated Component of embedded CGST/SGST on the cost actually incurred for the Inbound and Outbound Transportation of the exported product, such as on Tyres, Lube oil, Spares etc, in %age	18 per cent
	Total in INR	INR 2,46,850
10C	Total estimated embedded CGST/SGST in INR per Unit cost of the Exported Product	INR 0.90/-
	Total RoDTEP per unit cost of exported product	INR 455.51
	RoDTEP as percent of FOB value of exported Product	3.8%

Source: Siam

Thus, the RoDTEP of PCB would be 3.8%.

Alternative calculation of PCBA.

Populated Circuit Board Assembly (PCBA) is the heart of every electronic finished product which includes Mobile Phones-Smartphones & Feature Phones, Tablets, Laptops, Wearable devices etc.

PCBA forms 45% of the bill of material of a Mobile phones and Tablets. It is the heart of the Mobile phone and even more critical to smart phones. Most mobile manufacturers manufacture a PCBA in-house as it constitutes the largest part of the bill of material of a mobile phone in as apart from the fact that it is critical and confidential to the entire mobile phone manufacturing process.

The electricity cost and transportation cost for manufacturing a PCBA are proportionate to the cost incurred for manufacturing mobile phones. After the PCBA is manufactured the mobile phone is then assembled into a completely built unit bringing together the other parts.

The precision and automation required to building a good PCBA entails machines, air-conditioning, clean rooms etc. that use a lot of power and electricity in addition to safe and clean transport for the critical components mounted in the PCBA.

PCBA assembly in common parlance is called CKD type operations and after that the APTP operation which in common parlance is called SKD.

PCBA manufacturing cost out of composite cost of mobile phone manufacturing i.e. CKD + SKD or PCBA + APTP/ SKD assembly can be in the range of 45% of the total cost of mobile phone manufacturing. These costs include embedded indirect taxes applied on electricity, transport and port clearance charges.

PCBA's would be exported by mobile manufacturers under ITC HS Code 85177010. The RoDTEP rate as ascertained below would be claimed on export of a

PCBA as a product as well as an embedded component of products like mobile phone, chargers, laptops etc."

Assuming that the value of transport and electricity consumer per unit PCBA is the same as that of a mobile phone as shown in table 4.2.4, the calculation of PCBA works out as shown in table 4.2.5.

Table 4.2.4 RoDTEP of a Smartphone

Item	Percent of cost	Indirect taxes (%)	RoDTEP
Total cost about 10,000 cr			
Transport (inbound)	0.30	42.26	0.14
Transport (outbound)	0.50	42.26	0.22
Electricity from the grid	0.17	30.8	0.05
Fuel for Captive power	0.01	60	0.006
Ineligible GST [66]	0.24		0.24

Source: Data provided by firms

The RoDTEP percentage would be 0.67%. However, this figure does not include the RoDTEP of the embedded inputs. While data on PCBA is rare, based on information from one firm the RoDTEP is as shown below.

Table 4.2.5 RoDTEP of PCBA without PCB

PCBA without PCB	Percentage of total costs (%)	Indirect taxes	RoDTEP
Transport	0.1 [67]	42.6	0.041
Grid Power	0.15 [68]	30.3	0.05
Captive power	0.3	60	0.018
Ineligible GST	0.61		0.61
Total			0.719

RoDTEP of PCBA including PCB is roughly 0.72.

66. *This refers to the GST which is not refunded under the GST refund mechanism.*
67. *Table 4.2.5 shows that the total transport costs in a smartphone. Deflating outbound transport by 10% and inbound transport by 30%, the figure obtain is aprroximately 0.67%.*
68. *Increasing grid electricity costs of a smart phone by 15% gives us a figure of 0.46%, as 0.4% is the cost of electricity in assembling a smartphone as shown in table 4.2.5.*

4.3 RoDTEP - Other Inputs in a Smart or Feature phone

4.3.1 RoDTEP - Keypads

Smartphones and Tablets are similar products with same form factor only difference being the size of the screen. Usage of Smartphone and Tablet is also the same. The RoDTEP rates for smartphone could be considered for Tablets as well. The only difference is the size of the screen. Smartphones usually have screen sizes between 4"/10cm and 7"/17cm, a tablet is anything over this. When it comes to processing power and available apps - they usually share the same capabilities like same processors etc.. They have a similar form factor and have an almost identical touch-oriented interface. The BoM is also same for both these products. Also, most of the tablets comes with a sim card slot which make them even more similar to smartphones.

Laptops, though with a large form factor, are also similar to smartphones and tablets in terms of manufacturing process. The only difference is in the size of the screens and the addition of a keypad. This segment offers good growth potential in exports.

The industry is just gearing up their manufacturing for all electronic products and it is imperative that we fix a RoDTEP rate for tablets and laptops similar to mobile phones. This will boost the laptop and tablet industry and give them an incentive to not only manufacture tablets for India but for the world.

4.3.2
RoDTEP - Battery

Table 4.3.2: RoDTEP for Battery

Total Cost (Rs in lakhs)			
Item	2019-20	Indirect Taxes (%)	RoDTEP (%)
Turnover of the company	5,719.96 (5148) [69]		
Electricity Charges paid	18.69		
Grid Power	(0.36) [70] 18.55	30.3	0.11
Cost of diesel for generator	1.27 (0.02) [71]	60	0.01
Stamp duty			
Total Transportation cost	(2.9) 146.89	42.26	1.22
Inbound	127.72		
Outbound	19.17		
Total		1.48	

Source: Calculated from Data from firms

The RoDTEP estimate for batteries is 1.48%.

4.4
RoDTEP - Mobile Phones

4.4.1
RoDTEP - Smart phones

The RoDTEP for smart phones will depend on how much of the inputs are locally procured and how much is imported. In addition, there are some other features which would be important in a smart phone, such as costs of sampling, model upgradation and many such other features (Table 4.4.1).

69. This is the cost to the company assuming a pre-tax profit of 10%.
70. This is the grid cost as a percentage of total costs.
71. This is captive power cost as a percentage of total costs.

Table 4.4.1 RoDTEP of Smart Phones [72]

Turnover of the Company			1,11,27,10,10, 963	
Total Cost of Production in FY 2019-20 (INR)			1,01,43,90,98,867	
Cost Head	Cost total	% of share in total COP	Indirect taxes (%)	RoDTEP (%)
(i) Inbound Freight	33,83,56,753	0.33	42.26	0.14
(ii) Outbound Freight	52,57,55,527	0.53	42.26	0.22
(iii) Fuel for Captive power	1,06,27,190	0.01	60	0.006
(iv) Ineligible GST receipts	6,53,07,750	0.24		0.24
(v) Grid Electricity cost	16,96,09,908	0.17	30.8	0.06
Total				0.67
Inputs				
Enclosures		9 [73]	1.3 [74]	0.14
Battery chargers		2 [75]	3.4 [76]	0.07
Keypad		2 [77]	4.58	0.09
Battery pack		4 [78]	1.48	0.06
Other parts similar to battery chargers		13	3.5 [79]	0.46
PCB		5.25	3.8	0.20
PCBA without PCB		40	0.72	0.30
Total for inputs				1.32
RoDTEP				1.99

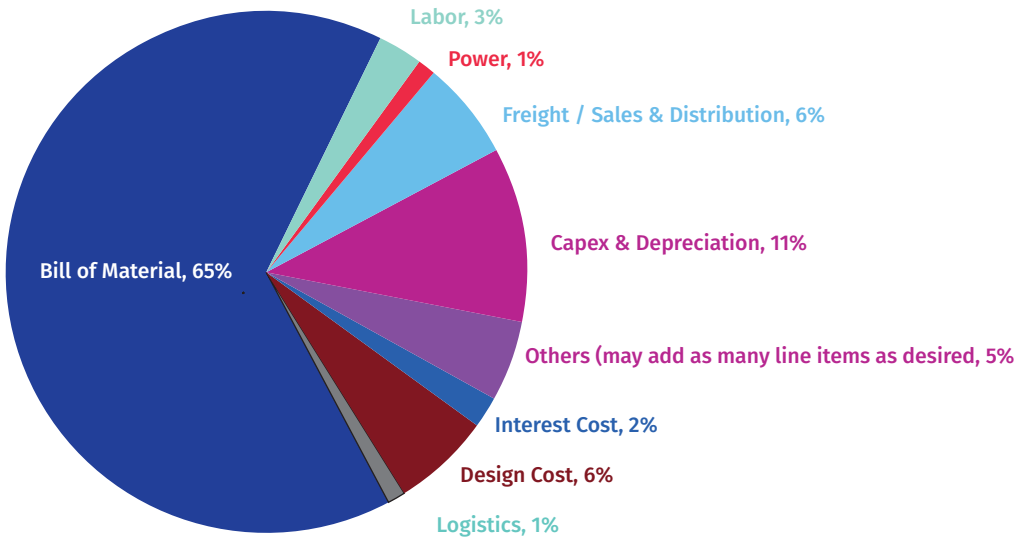
The estimated RoDTEP for Smart phones will be around 2%.

72. *Complete data used for deriving this is shown in Annex 4. This Annex also contains data on enclosures*
73. *Information given by firms*
74. *See table*
75. *Information provided by firms*
76. *See above where for small parts the RoDTEP is 5%*
77. *Information provided by firms*
78. *Information given by firm*
79. *Based on the Information provided by firms as estimates*

4.4.2 RoDTEP - Feature Phones

The RoDTEP calculations for feature phones also work with the same parameters. The only difference between feature phones and smart phones is that the share of BoM in a feature phone is 65% compared to BOM for smart phones which is 75%. The cost structure of a feature phone is shown in Figure 4.6.1.

Figure 4.4.1 Cost of Manufacture of a Feature Phone



Source: Primary Data Collection

The RoDTEP calculation for feature phones is based on interviews with firms and on the assumption that 45% of the inputs used in production of feature phones are procured locally. [80] It is also to be noted that while the figure for both power and logistics earlier was given as 1% each in the data above, when actual data was obtained from companies on their electricity bill the percentage costs were lower at around 0.3% each.

80. This information was provided by firms producing feature phones

Table 4.4.2 RoDTEP for Feature Phones [81]

Item	% of costs	Indirect taxes/ RoDTEP (%)	RoDTEP of final Product (%)
Transport	0.74	42.26	0.31
Electricity			
Grid	1.1	30.8	0.35
Captive Power	0.12	60	0.07
Inputs			
Small Inputs			
Battery	9	1.58	0.12
Charger	6	3.4	0.20
Earphones	1	3.4	0.034
Keypads	1.5	4.58	0.07
Enclosure	3.0	1.3	0.04
Packaging	1.25	3.4	0.043
Lens	0.60	3.4	0.021
Other small parts such as cables, camera modules etc.	22	3.4 [82]	0.75
Large Inputs			
PCB	6 [83]	3.8	0.23
PCBA without PCB	14.5	0.72	0.10
Repair and Maintenance	0.06	18	0.001
Life insurance of employees	0.01	18	0.002
Total			2.34

Source: Data from firms

Thus, the estimated RoDTEP for feature phones comes to approximately 2.34%.

4.4.4 RoDTEP - Tablets

Table 4.3.1: RoDTEP for Tablets

Item	% on AUR	Indirect tax percentage (%)	RoDTEP (%)
Inbound Freight (Port to Plant) (Avg. 1$ per box)	0.30	42.26	0.13
Outbound Freight (Plant to External destination) (Avg. 1.5$ per box)	0.40	42.26	0.17
Power & Fuel (Avg. 0.33$ per box)	0.10	30.3	0.03
Total			0.33

Thus, the estimated RoDTEP for tablets comes to 0.33%.

81. See Annex 5 for datasheets given by firms producing feature phones.
82. This is based on an average RoDTEP of small parts.
83. Data provided by companies.

4.5 Additional information gathered from Primary Surveys

There was a lack of clarity among the firms on what exactly constituted RoDTEP. Most were not able to provide data on indirect taxes on coal and several sources were needed before these could be compiled. Initial perplexity on which GSTs could be included under RoDTEP also existed.

Other countries normally use overhead costs such as advertising, entertainment, gifts, conveyance, travel for work purposes, accommodation etc. However, whatever is used the proportion as a share of total costs is unlikely to be high. An important factor that is missing is the indirect taxes paid to retain the brand value of the product. From primary data collection it also became obvious that RoDTEP would increase as indigenisation increases. As most of the low value products with a higher RoDTEP is already procured domestically, indigenisation will now have to go to higher value products. The RoDTEP calculation for enclosures provides some guidance in this context. Given the data from the firms, it appears that a maximum of 25% of the inputs are procured locally. Also, the experience of other countries such as China shows that it takes several years to reach an indigenisation level of around 60%. **The experience from enclosures shows that for every 10% indigenisation, RoDTEP will increase by around 0.2**. Hence even with maximum indigenisation RoDTEP is unlikely to increase by more than 0.5 in the near future.

4.6 Conclusion

- The Merchandise Exports from India Scheme (MEIS) has been a major support scheme for exports from selected sectors. **In light of India's current export disabilities, an adequate replacement of MEIS is critical to avoid the scale of these disabilities becoming even more acute as MEIS phases out in December 2020.**

- RoDTEP, as a scheme, involving a refund of all indirect taxes, levies and duties for exports, are allowed under the WTO. Similar schemes are also implemented by several other countries, including India's major competitors in world trade.

- It cannot be emphasized enough that RoDTEP is not a subsidy scheme like the MEIS. It is a scheme that refunds the indirect taxes that the industry pays at various stages of its production process and those paid by embedded inputs. Several countries have been implementing similar schemes for a long time

- In light of the findings in the report, we can gather that the range of RoDTEP varies between as little as 1 to around 5%. If an average rate were to be taken on the basis of products currently being exported than this rate would work out to around 3% using trade weights.

Chapter 5

Estimating the Effects of RoDTEP on Export Growth of Selected electronic sectors

For estimating the impact of RoDTEP on exports of different Electronics products, the study will use the Global Trade Analysis Program (GTAP). Instead of using regressions or partial equilibrium models to estimate trade effects, a general equilibrium (CGE) model has been used here. This paper has estimated RoDTEP for several products and their inputs, hence a CGE model based on input output linkages appears most appropriate, instead of a limited analytical framework of partial equilibrium. RoDTEP is akin to reducing indirect taxes and is not a subsidy. Hence its treatment in the model is not that of a subsidy to export but one of refund of indirect taxes.

The GTAP model is a multi-sectoral and multi-regional economic model, which captures linkages between several industries in each country and across the world. It captures markets for supply and demand in households (consumers), firms, primary factors and products. Trade between a given industry and linkages across industries are captured based on an Input-Output (IO) table for every country covered by the data base. Bilateral exports and imports between different countries are captured, based on relative price differences arising from tax/subsidy policies and technological changes. The model also allows for global savings and investment flows to balance each other globally. Households receive income from the labour and capital that they own. Consumption shares are determined by Cobb-Douglas expenditure function [84] with shares derived from IO tables.

The purpose of the GTAP model is to determine the effects of a change in the indirect taxes levied on trade flows (indicated by RoDTEP, the exogenous variable) on the various endogenous variables of the model – prices, production, consumption, exports, imports and welfare. Introducing such changes in the model is known as a shock or a simulation; the consequent result represents what the economy would look like if the policy change or shock had occurred. The difference in the values of the endogenous variables in the base data and the simulation represents the effect of the change.

Global Trade Analysis Project (GTAP) model is a publicly available multi-sectoral multi-regional Computable General Equilibrium (CGE) model. This has several standard features of a global CGE model such as Constant Elasticity of Substitution (CES) nests for production and trade, a flexible Constant Difference Elasticity (CDE) functional form for consumption, Cobb-Douglas utility function for the aggregate regional household, perfect competition, constant returns to scale, conversion of all global savings into all global investment and Armington assumption [85] to capture heterogeneity between domestic and imported products as well as amongst imports from different sources. This model is well-documented at length in Hertel (1997) [86].

84. *The consumer's expenditure function provides the minimum expenditure that a consumer incurs when purchasing a given bundle of goods that help him or her attain a desired level of utility. https://study.com/academy/answer/compute-expenditure-function-from-cobb-douglas-utility-function-and-quasi-linear-utility-function-with-steps.html*
85. *The assumption that internationally traded products are differentiated by country of origin. This is a standard assumption of international CGE models, used to generate smaller and more realistic responses of trade to price changes than implied by homogeneous products. http://www.comparedefinitions.com/armington-assumption.html*
86. *https://vi.unctad.org/tda/papers/CGE%20Models_Marco/Hertel%20and%20Tsigas%20(1997)%20Structure%20of%20GTAP.pdf*

5.1 The shocks in the model

The GTAP analysis in this study has worked with a range of simulations to assess the implications of giving RoDTEP to different products in the Electronics sector. Two sets of the simulations have been performed.

The first consists of introducing the RoDTEP rates on the different products identified in Chapter 4 in the model. As accurate data on RoDTEP on PCBA was not available, two scenarios have been examined. The first is the introduction of 2% RoDTEP on the PCBA sector and the second is the introduction of 4% RoDTEP in the PCBA sector.

All the electronic products are aggregated in a GTAP sector named “ele”, or Electronic and Computer Products. Given the disaggregated products we have covered in our study, the standard model had to be modified. There are various approaches to this – such as splitting the sectors completely using the shares on input-output, trade, tariff, protection, etc., at disaggregated level, (e.g. Narayanan and Khorana (2014) does this in the context of cotton and coffee sectors) and simply using the trade and tariff data that is more easily available than these other data components (e.g. Narayanan et al (2010) does this in the context of auto industry). Both of these methods have their pros and cons; the first one has many simplifying assumptions as it is difficult to get all these datasets at such a disaggregated level; the second one ignores the production function and complementarities between the disaggregated sectors.

Therefore, for this paper, a newly developed simplified yet concise methodology was used to get the results at the disaggregated sector level. The IO datasets and elasticities at the level of “ele” or Electronics, were used to disaggregate trade, costs, tax and tariff datasets at the disaggregated levels, as shown by Table 2.1.4, Chapter 2. The overall percent changes in the “ele” sector, were then disaggregated corresponding to each component’s RoDTEP shock, and then the results to the disaggregated sector, were derived based on its trade share and costs breakdown.

5.1.1 Time Frame for the Results

The results derived by the model works from one general equilibrium to another. This implies that the shock is given in a stationary state and the disturbance then ripples through the economy before it settles to another general equilibrium when all markets clear. These includes products, prices, trade, investment and factor markets such as land, labour and capital. Normally this period of moving from one general equilibrium state to another can take anywhere between one and a half to three years. The period is determined by how smooth are the adjustments in the market, how rapidly technology is changing and how quickly the market signals are being transmitted in the economy. In this study based on empirical literature, it is assumed that the period of adjustment is between one and a half to two years.

5.2 Results of different sub-sectors in Electronics

Based on the model, which is a comparative static one, i.e. technology changes are not built into it, the effects on the different sectors are shown below. These changes will arise when the RoDTEP rates shown in Chapter 4 are applied to the different subsectors. The effects on the entire economy and the Electronics sector as a whole are also provided below in Table 5.1.

Table 5.1 Impact of RoDTEP on the Economy and the Electronics Sector (estimates given in percentages)

Impact of RoDTEP on:	Macroeconomic Effects on the economy %	Electronics sector in India %
Output	0.03	5.2
Exports	0.47	37.8
Imports	0.42	1.6
Employment	0.02	5.1

The overall effects on the economy while positive are small. It is the sectoral effects which are more important. The impact on various Electronics products are shown in Table 5.2 below.

Table 5.2.2 Impact of RoDTEP on Different Electronics Products (estimates given in percentages)

Impact of RoDTEP on:	Battery chargers	Enclosures	PCBs	PCBA (with 2% RoDTEP)	PCBA (with 4% RoDTEP)
Output	7.4	10.8	4.5	2.6	5.35
Exports	54.2	79.2	33	18.9	38.76
Imports	2.3	3.4	1.4	0.8	1.72
Employment	7.4	10.7	4.5	2.6	5.22
Impact of RoDTEP on:	**Keypads**	**Batteries**	**Smartphones**	**Feature Phones**	
Output	3.2	6.7	6.1	10.2	
Exports	23.1	49.	44.5	74.6	
Imports	1.0	2.1	1.9	3.2	
Employment	3.1	6.7	6.03	10.1	

Conclusion

The output, exports and employment for all Electronics components and final products will grow by relatively large proportions with the lower value products growing at higher rates. This is to be expected. What is surprising is that import growth in most cases is comparatively low, signifying that RoDTEP will lead to import substitution with currently existing technologies. However these results must be tempered with the fact that the initial base of these sectors is very small and hence high rates of growth are to be expected.

References

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Annexures

Annex 1: *Practices of some countries of refunding indirect taxes*

Countries	Examples of items for which input tax is deductible
ASEAN	
Philippines	Goods purchased or imported for any of the following purposes: · Sale of the goods themselves · Conversion into a finished product for sale, or goods intended to form part of a finished product for sale, including packaging materials · Use of supplies in the course of business · Use of raw materials in a supply of services · Use in trade or business for which deduction for depreciation or amortization is allowed · The purchase of real property on which VAT has been paid · The purchase of services on which VAT has been paid · Transactions deemed to be sales · Transitional input tax* of 2% of value of beginning inventory or of the actual VAT paid, whichever is higher · Transitional input tax credits allowed under the law and regulations *For purposes of the above table, transitional input tax is a form of input tax allowed on transition from non- VAT registered status to VAT registered status. It may be credited against output tax when the VAT registration takes effect.
Thailand	Generally, input tax that is attributable on expenses related to the VATable business is deductible for VAT computation: · Input tax on purchase of raw materials · Input tax on purchase of capital assets · Input tax on purchase of goods for resale · Input tax on royalty payment · Input tax on sale and marketing expenses · Import VAT paid to customs department for import of goods into Thailand · Self- assessed VAT paid to revenue department on reverse charge mechanism
Other Asian nations	
China	With the exception of certain types of goods, exports of goods are generally exempt with credit; that is, input VAT previously paid on the purchase of goods and services used for the production of goods for export is refunded on application. This procedure is commonly known as the "VAT export refund." However, the VAT exemption with credit mechanism does not apply to certain types of goods. For those goods whose VAT export refund rates are less than the applicable VAT rates for normal supply, the taxable person must bear the difference as a cost, even though the goods are sold for export. Such VAT cost is commonly referred to as an "export VAT leakage" or "input VAT disallowance." Depending on the type of exporting enterprise, the VAT export refund and the input VAT disallowance are calculated based on the different methods described below. Manufacturing enterprises (assuming no tax-exempt raw materials). For companies engaging in the production of taxable goods, the following are the calculations of the input VAT disallowance and the relevant creditable input VAT. (contd.)

Countries	Examples of items for which input tax is deductible
	Calculation of input VAT disallowance (Calculation #1) Input VAT disallowance = Free on Board (FOB) value of export sales x (Applicable VAT rate – VAT export refund rate) Calculation of creditable input VAT (Calculation #2) Creditable input VAT = Total input VAT – Input VAT disallowance (as determined in Calculation #1) + Excess input VAT brought forward from previous period The taxable person must compute VAT payable for each reporting period by using the following calculation. Calculation of VAT payable (Calculation #3) VAT payable = Output VAT due on sales for the period – Creditable input VAT (as determined in Calculation #2) If the amount of creditable input tax in a period is greater than the output VAT due on sales in that period (that is, Calculation #3 results in a negative balance), the taxable person is entitled to a VAT export refund. The VAT export refund is equal to the lesser of the following amounts: · FOB value of export sales x VAT export refund rate · The absolute value of Calculation #3 if the calculation results in a negative balance
Korea	· The value-added tax amount on goods or services that are used by taxpayers for their own business · The value-added tax amount on the importation of goods that are used by taxpayers for their own business or imported by them for such use. However, certain input tax is not recoverable.
Africa	
Kenya	· Professional fees · Utility costs
South America	
Chile	Input tax is deductible on every item that complies with the requirements (subject to VAT and related to a taxable business use).

Annex 2: *Questionnaire for Firms*

Name of the Electronics Product:
Total Cost of Production in FY 2019-20 (INR):

Units of Product manufactured between FY 2019-20				
Firm	**Total number of units manufactured**	**Number of Units sold in domestic market**	**Number of units exported**	**FOB value per unit of products exported (INR)**

Units of Product manufactured between FY 2019-20					
1	Transport/ Freight	% share in total cost	Indirect tax in %	RoDTEP (column D X E)	Whether refunded? (Y/N)
	Share of transport cost to the total cost of production				
	Share of transport cost in the total cost of production in tier 1 inputs produced domestically				
1.1	Fuel in Road Transport (Inbound - Cost incurred in the process of procuring raw materials, consumables, spares for manufacture of export product)				
		% share in total cost	Indirect tax in %	RoDTEP (column D X E)	Whether refunded? (Y/N)
S1	VAT on fuel used in transportation				
C1	Central Excise duty on fuel used in transportation				
S2	VAT on fuel used in transportation for tier 1 inputs				
C2	Central Excise duty on fuel used in transportation in tier 1 inputs				
	Other taxes, if any				
1.2	Fuel in Road Transport (Outbound - Cost incurred in the process of transporting exported product from factory to the gateway port)				
		% share in total cost	Indirect tax in %	RoDTEP (column D X E)	Whether refunded? (Y/N)
S1	VAT on fuel used in transportation				
C1	Central Excise duty on fuel used in transportation				
S10	Embedded SGST on inputs for transport sector				
C5	Embedded CGST on inputs for transport sector				

1.3	Fuel taxes for domestic transfer of inputs/outputs				
		% share in total cost	Indirect tax in %	RoDTEP (column D X E)	Whether refunded? (Y/N)
	Air/Sea Freight taxes				
	Fuel taxes				
	Other taxes, if any on air/sea port handling charges				
2	Power/ Electricity	% share in total cost	Indirect tax in %	RoDTEP (column D X E)	Whether refunded? (Y/N)
	Share of power in total cost of production				
	Share of power in total cost in production of tier 1 inputs*				
2.1	Grid Power (Final Product)				
		% share in total cost	Indirect tax in %	RoDTEP (column D X E)	Whether refunded? (Y/N)
	Share of grid power cost to the total power cost				
S5	Electricity duty paid on grid electricity charges				
2.2	Grid Power (Tier 1 Inputs) *				
		% share in total cost	Indirect tax in %	RoDTEP (column D X E)	Whether refunded? (Y/N)
	Share of grid power in total cost in production of tier 1 inputs				
	Electricity duty paid on grid electricity charges paid by tier 1 input suppliers				

2.3	Self-generated Power through DG sets (Final Product)				
		% share in total cost	Indirect tax in %	RoDTEP (column D X E)	Whether refunded? (Y/N)
	Share of self-generated power cost as percent of total power cost				
	Fuel cost of total self-generated power cost				
S2	VAT on fuel used in generation of captive power				
	Environment Clearance Tax (fitness certificate for generators)				
	Other taxes, if any				
2.4	Self-generated Power through DG sets (Tier 1 Inputs) *				
		% share in total cost	Indirect tax in %	RoDTEP (column D X E)	Whether refunded? (Y/N)
	Share of self-generated power cost as percent of total power cost of tier 1 inputs				
	Fuel cost of total self-generated power cost of tier 1 inputs				
S2	VAT on fuel used in generation of captive power of tier 1 inputs				
	Environment Clearance Tax (fitness certificate for generators) by tier 1 input suppliers				
	Other taxes, if any paid by tier 1 input suppliers				
3	Power/ Electricity	% share in total cost	Indirect tax in %	RoDTEP (column D X E)	Whether refunded? (Y/N)

4	Service inputs incorporated in product	% share in total cost	Indirect tax in %	RoDTEP (column D X E)	Whether refunded? (Y/N)
	Consultancy services as input incorporated provided for upgrading product to international standard				
	Branding cost as input incorporated in product to upgrade to international standard				
	Service Tax (GST) paid for branding				
	Certification cost as input incorporated on upgradation of product to export quality				
	SEIS				
	GST loss on Commission Agents stationed outside India				
	GST paid on repair & maintenance of capital goods				
	Cost of financial hedging to the total production		(mention exchange rate)		
	Any other taxes paid				
5	Unregistered dealers	% share in total cost	Indirect tax in %	RoDTEP (column D X E)	Whether refunded? (Y/N)
	Share of purchases made from unregistered dealers in total cost of production				
S8	Embedded SGST in purchases from unregistered dealers				
C3	Embedded CGST in purchases from unregistered dealers				

6	R&D + Transfer of Technology	% share in total cost	Indirect tax in %	RoDTEP (column D X E)	Whether refunded? (Y/N)
	Share of R&D and transfer of technology in total cost of production				
	Duties and Surcharges on R&D Costs				
	Tier 1 add				
	Duties and Surcharges on License Fees for Transfer of Technology				
	Any other taxes paid				
7	Others	% share in total cost	Indirect tax in %	RoDTEP (column D X E)	Whether refunded? (Y/N)
D	Any Other Taxes/ Duties/Levies, which are not refunded/ exempted/ reimbursed under any of the prevalent mechanisms, such as Advance Authorization, Drawback and GST refund - Please specify with justification				
	% share of taxes in supply chain of major input products to the total production*				
	Any other taxes paid				

***HS codes of tier 1 suppliers**

HS codes of inputs of inputs used by tier 1 suppliers

Detailed cost data from the industry will be attached alongside this report upon submission to the RoDTEP Committee as notified on 30th July, 2020 via order no. 'F.No. 605/12/2020-DBK/736' by the Government of India.

Notes:


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