

**Strategy Paper
for Growth
of
Engineering Exports**

**2005-06
to
2009-10**



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EXECUTIVE SUMMARY

2.1 This chapter summarizes the analysis of the global Engineering trade and other findings with respect to Thrust Products and Markets as key elements for India's engineering export growth strategy. Broad International Marketing strategy and necessary support elements for the successful implementation of the strategy are also presented. Role of various bodies in increasing India's engineering exports along with recommendations is also summarized in this chapter.

WORLD IMPORTS AND INDIA'S EXPORTS OF ENGINEERING PRODUCTS

2.2 Trade in engineering products has been growing at a healthy rate over the last decade. World imports grew at a CAGR of 6.1% over the period 1995-2003. On the other hand, India registered a better export growth rate of 21% over the period 1998-2003. But, the share of India's engineering exports in total world imports has remained historically low. The following table presents a bird's eye view of the share and associated growth of India's engineering exports for major product categories, in global trade.

Exhibit 2.1

World Engineering Trade and India's Exports

(Unit: US \$ Bn)

Particulars	1998			2003			CAGR %	
	World Imports	India Exports	% Share	World Imports	India Exports	% Share	World	India
Capital Goods	1058	1.32	0.12%	1371	3.34	0.24%	5.32%	20.40%
Primary Iron, Steel and Items thereof	251	1.5	0.60%	347	4.37	1.26%	6.69%	23.84%
Non-Ferrous Metals and Products Thereof	114	0.4	0.35%	134	1.03	0.77%	3.29%	20.82%
Consumer Durables	523	1.1	0.21%	907	2.58	0.28%	11.64%	18.59%
Non-Engineering Items	5	0.01	0.20%	11	0.08	0.73%	17.08%	51.57%
Grand Total	1951	4.33	0.22%	2770	11.4	0.41%	7.26%	21.36%

Source: UNCTAD PCTAS Data, EEPC 2003 Data

2.3 From exhibit 2.1, it is found that though share of Indian exports has almost doubled in world imports, it is still very low at 0.41% in 2003. The higher growth rates for Indian exports compared to world imports give strong indications of a higher share of Indian exports in World Imports in the consequent years. In 2003, India exported only US \$ 11.4 billion compared to world imports of US \$ 2.77 trillion.

2.4 In 2003, of the 61 product categories, the share of India's exports, in the world imports was more than 1% only in the categories presented in the following table: -

Exhibit 2.2

List of Categories for India with share of > 1% of World Engg. Imports (2003)

Category	World's Imports (2003) (US \$ Mn.)	Share of Category of World Imports (2003)	Indian Exports 2003 (US \$ Mn.)	India's Exports as % of Category Imports (2003)
Stainless Steel Utensils	2,510	0.11%	126	5.0%
Steel Files	174	0.01%	7	3.8%
Electrodes	3,405	0.15%	120	3.5%
Sanitary Castings	7,790	0.34%	229	2.9%
Ferrous Holloware	8,667	0.38%	245	2.8%
Hand Tools	5,260	0.23%	140	2.7%
Prime Iron and Steel	142,521	6.28%	2,283	1.6%
Bright Bars	4,727	0.21%	67	1.4%
2/3 Wheelers	11,845	0.52%	167	1.4%
Steel Wire Ropes	972	0.04%	14	1.4%
Razor Blades	2,383	0.10%	26	1.1%
Ferro Alloys	9,488	0.42%	100	1.1%
Bolts and Nuts	12,213	0.54%	123	1.0%

Source: UNCTAD, PC-TAS Database; EEPC 2003

Note: Figures above are rounded-off

2.5 From exhibit 2.2, it is interesting to note that except for the Prime Iron and Steel category, the remaining account for an insignificant share in engineering imports of the world. India's share is higher in product categories that are not significant in the world imports.

2.6 All the above information and presentation points to the fact that a focused approach on important product categories could enable India to increase its share in world imports of engineering products. Thus arises the need for identification of thrust products and important destinations for them namely the thrust markets.

SELECTION OF THRUST PRODUCTS AND MARKETS

METHODOLOGY FOR IDENTIFICATION OF THRUST PRODUCTS AND THRUST MARKETS

Thrust Products

2.7 Analysis has been carried out for important world-import product categories as well as India's important export categories. Hence, to identify thrust product categories/sub-categories a detailed analysis has been carried out for top product categories comprising for about 90% of world imports (i.e. top-27 world import categories) of engineering goods. These categories represent about 82% of the India's exports of engineering products.

2.8 Further analysis at sub category level (4-digit HS code data) has been carried out for top sub-categories, which accounted for about 80% of the total value of the product category to identify potential thrust products and thrust markets. Wherever products (i.e. sub-categories) are having relatively similar profiles in terms of domestic manufacturing, export markets catered to, level of technology, etc., they have been grouped into single category and analyzed thereafter.

2.9 The above analysis has been carried out on following parameters;

Category Level Analysis

- ▶ World imports of product category, growth trends, share of product category as percentage of world engineering imports
- ▶ India's export performance in the product category - India's exports as a percentage of total world imports and growth trends. India's performance in 2003-04 over previous year
- ▶ Top sub-categories (4-digit HS code data) accounting for 80% of the world imports have been identified and further analysed as follows. *(Note: As mentioned earlier, for sub-categories that are homogeneous in nature are grouped together and analysed.)*

Sub-category Level Analysis

- ▶ World imports of product category, growth trends, share of product sub-category as percentage of product category, etc.
- ▶ India's export performance in the product sub-category - India's exports as percentage of total world imports and growth trends. India's performance in 2003-04 over previous year
- ▶ Continent and trade-block related data, level of trade within regions and share of intra-region trade.
- ▶ Key importing countries and share of India's exports in their imports. Key destinations for India's exports.
- ▶ Identification of key competitors for India's exports of particular sub-category for each product sub-category.
- ▶ Qualitative analysis for sub-categories on following aspects;
 - 3 India's present export performance- current status and key characteristics of the industry
 - 3 Key features of the industry
 - 3 Key factors inhibiting export growth
 - 3 Other factors considered include Technology, Scale of Operations, Realisation in Export Markets, Production Capacity related constraints, Market initiation/development efforts required like Pre Sales support, After Sales Service, Distribution Network, etc.

2.10 Based on the above factors, a potential list of export thrust product categories/sub categories was identified. Next a further shortlisting of thrust products was made using an appropriate selection cut off criteria (in respect of value and CAGR of world imports as well as Indian exports) and other qualitative factors namely the need to move towards medium and high technology and also high value added products exports, products which offer relative logistical advantage opportunities and threats based on Trade Agreements, feasibility of products contributing towards achieving the targeted growth rate of 15% p.a. in the next five years and the supply and the competition factors. The final list of the selected Thrust Products based on the above is provided in the Exhibit 2.3.

Exhibit 2.3

Final List of Selected Thrust Products (TP)

Categ. Sr. No.	Product Category	Product/ Product Subcategory	Final Selected Thrust Products (Existing)	Final selected New Thrust Products
1	Commercial Vehicles	Commercial Vehicles and Passenger Cars	Commercial Vehicles and Passenger Cars	Luxury Buses and Higher Horse-power Trucks
2	Electrical Power Equipment and Parts	Electric transformers and static converters	Transformers (both power as well as distribution) and Static Converters	-
		Electric Motors and Generators	Electric Motors and Generators	High Efficiency Motors and Generators
3	Automobile Parts	Parts of Motor Vehicles	Part of Motor Vehicles	-
4	Instruments - All Types	Instruments used in Medical / Surgical Applications including X-Ray Machines	Medical/ Surgical Instruments, Optometry Instruments and X-Ray Equipment	-
		-	-	Orthopedic Appliances, artificial parts and implants, etc.
		Analytical and Measuring Instruments	Oscilloscopes, Measuring Instruments for Electrical Quantities	-
5	Prime Iron and Steel	Flat Rolled Products of Stainless Steel	Flat Rolled Products of Stainless Steel	-
7	Other Industrial Machinery	-	Printing and Processing Machines	-
		-	Transmission Shafts	-
		-	-	Electric Furnaces
8	I. C. Engines and Parts	Various types of IC Engines	Compression Ignition and Electrical Ignition type IC Engines	Compact Engines
		Parts of IC Engines	Parts of IC Engines	-
9	Electric Manufacturers NOS	Electric Filament or Discharge Lamps	Electric Filament or Discharge Lamps	-
10	Aluminium and Products thereof	Unwrought Aluminium	Alloyed and Unalloyed Aluminium Ingots	-
		Aluminium plates and sheets and strip	Aluminium plates and sheets and strip including Electrolytic Grade	-
		Other articles of Aluminium (including foils, bars and rods, extrusions, profiles and scrap)	Aluminium foils	Can stock [identified only from the long term possibility (more than 5 years) of development of this product]
11	Other Non-ferrous Metal and Products	Copper and Copper Products	Primary Copper	FRC Copper, Oxygen Free Copper, High Dimension CC Rods (16 mm and above)
12	Other Chemical Plant	Centrifuges including centrifugal dryers	Centrifuges including centrifugal dryers	Machinery for working rubber or plastics
14	Electric Wires and Cables	Electric Wires and Cables	Insulated Wires, Electric Conductors and Optical Fibre Cables	Wires and Cables of Oxygen Free Copper
16	Heating & Cooling Equipment	Refrigeration and Air-conditioning (including Commercial and Industrial)	Refrigeration and Air-conditioning (including Commercial and Industrial)	-

Categ. Sr. No.	Product Category	Product/ Product Subcategory	Final Selected Thrust Products (Existing)	Final selected New Thrust Products
17	Tractors and Agricultural Equipment	Tractors and Trailers	Tractors and Trailers	-
		Agricultural Machinery	Agricultural Machinery	
20	Cranes, Lifts and Winches	parts suitable for use in pulley tackle and hoists and construction, excavating machinery	parts suitable for use in pulley tackle and hoists and construction, excavating machinery	-
21	Industrial Castings	Moulding Boxes for Metal Foundry	Moulding Boxes for Metal Foundry	-
		Transmission Shafts (incl. Crankshafts and camshafts)	Transmission Shafts (incl. Crankshafts and camshafts)	-
23	Steel Pipes and Tubes	Tubes, Pipes and Hollow Profiles seamless of iron or Steel (excl. cast iron)	Seamless Pipes and Tubes of iron and steel	-
		Other Tubes and Hollow Profiles (e.g. Open Seam/ Welded/ Riveted/ Similarly closed)of iron/ steel	Welded Pipes and Tubes of iron/ steel	-
		Tube or pipe fittings of Iron or steel.	Tube or pipe fittings of Iron or steel.	-
		Welded steel pipes of diameter greater than 40.64 mm	-	Welded steel pipes of diameter greater than 40.64 mm
25	Cutting Tools	Handsaws and blades for saws of all types	-	Handsaws and blades for saws of all types
		Grinding Stones and grinding wheels	-	Grinding Stones and grinding wheels
26	Bicycles and Parts	Bicycles	Bicycles	High-end Bicycles
		Bicycle Parts and Others	Bicycle Parts	High-end bicycle parts

Source: UNCTAD PCTAS Data analysis, AFF Research

Identification and Selection of Thrust Markets

2.11 In line with the selected Thrust Products, markets have been identified. This has been done based on the analysis of the world importing markets of Thrust Products and analysis of India's export markets for Thrust Products and other qualitative factors as considered for shortlisting the thrust products.

2.12 The final list of the selected Thrust Markets grouped according to the continents based on the above selection criteria is provided in the Exhibit 2.4.

Exhibit 2.4

Continent-wise Final List of Selected Thrust Markets (TMs)

Continent / Group	Selected Thrust Countries / Markets	Comment
Asia	China	Mainly Developing Countries
	Hong Kong	
	Indonesia	
	Iran	
	Japan	
	Malaysia	
	Oman	

Continent / Group	Selected Thrust Countries / Markets	Comment
	Philippines	
	Russia	
	Saudi Arabia	
	Singapore	
	South Korea	
	Turkey	
	UAE	
Europe	Austria	Mainly Developed Countries
	Belgium	
	Czechoslovakia	
	France	
	Germany	
	Italy	
	Netherlands	
	Norway	
	Poland	
	Spain	
	Sweden	
	Switzerland	
UK		
Australia and Oceania	Australia	Developed Country
Africa	South Africa	Developing Countries
North America	Canada	Developed Country
	Mexico	Developing Country
	USA	Developed Country
Latin America	Argentina	Developing Countries
	Brazil	
	Chile	

Source: UNCTAD PCTAS Data analysis, AFF Research.

ENGINEERING TRADE BY TRADE BLOCKS

2.13 Conclusions drawn from the results of the analysis of engineering product imports by various trade blocks and India's export relation with them (in respect of engineering products) were used in supporting the finding of Thrust Product and Thrust Market analysis.

ASEAN

2.14 In the ASEAN context, the following observations deserve consideration: -

Marginal Indian Presence

In 2003, India's engineering exports are just over 1% of the total ASEAN engineering imports from outside the block.

Intra-ASEAN trade

In 2003, the intra-ASEAN trade stood at only US \$ 32 Bn compared to ASEAN's imports of US \$ 107 Bn from the rest of the world. This signifies that there exists significant potential for exports/trade in the region. Therefore, it is critical that India gives serious consideration to trade arrangements with ASEAN.

Product Export Opportunity

Aluminum products, Prime Iron Steel, Office Equipments and Other non-ferrous products not only make up for close to 53% of India's engineering exports to ASEAN, but also at the same time occupy 22% of ASEAN's imports in that category. In addition, the following product categories present opportunities for growth: -

- 3 Automobile Parts
- 3 Industrial Castings

NAFTA

2.15 In the NAFTA context, the following observations deserve consideration: -

Marginal Indian Presence

In 2003, India's engineering exports was 0.49% of the total NAFTA engineering imports from outside the block.

Intra-NAFTA trade

In 2003, NAFTA's within block imports accounted for 46% of its total imports. Thus, NAFTA in itself is a significant market. This free trade area is indeed a challenging entry barrier to any geography looking at trade opportunity. Its imports from outside the block accounted for one-sixth of the world imports. India's share at 0.26% of this presents the need for growth.

Product Export Opportunity

Automobile Parts, Instruments All Types, Electric Power Equipment Parts, Prime Iron and Steel make up for close to 31% of India's engineering exports to NAFTA. The following product categories present opportunities for growth owing to the marginal presence in import basket of NAFTA.

- 3 Industrial Castings
- 3 I.C. Engines and Parts
- 3 Commercial Vehicles: NAFTA's imports from outside the block stood at 20.5% in 2002, while India's exports were negligible.

European Union (EU)

2.16 In the context of EU, the following observations deserve consideration: -

Marginal Indian Presence

In 2003, India's engineering exports accounted for 0.71% of the total EU engineering imports from outside the block. This marginal presence could be increased by focus on thrust products.

Intra-EU trade

In 2003, EU's within block imports accounted for 67% of its total imports. This much magnitude of free trade area is indeed a challenging entry barrier to any geography looking at trade opportunity here. Thus, it is important that India focuses on thrust products to increase market share.

❑ Product Export Opportunity

Commercial Vehicles, Electric power equipment & parts, Automobile Parts, Prime Iron and Steel account for 37% of India's exports and 38% of EU Imports. Thus, significant opportunity for increasing the India's share in these categories exists. **It is important to note that Commercial Vehicles are significant unlike in the case with NAFTA.** The following products deserve attention for growth: -

- 3 Industrial Castings
- 3 Office Equipments
- 3 Commercial Vehicles

THRUST PRODUCT AND THRUST MARKET EXPORTS - ESTIMATED GROWTH

2.17 Thrust product export estimates from 2004-05 to 2009-10 have been made on the basis of trend analysis of past data, interview with engineering exporters and industry studies. Exhibit 2.5 presents the same in line with the target of doubling India's engineering exports over the next five years. This growth corresponds to a CAGR of 15% p.a. for India's exports from 2004-05 to 2009-10.

Exhibit 2.5

Thrust Product Estimates (2005-06 to 2009-10)

(Unit: US \$ Mn)

Sr. No.	Product Category	Product/ Product Sub-category	Thrust Product (Existing / New)	Identified Thrust Products	2004-05	2005-06	2007-08	2009-10
1	Commercial Vehicles	Commercial Vehicles and Passenger Cars			876	1,051	1,514	2,180
			Existing	Commercial Vehicles and Passenger Cars	830	999	1,362	1,853
			New	Luxury Buses and Higher Horse-power Trucks	-	53	151	327
2	Electric Power Equipment and Parts				779	883	1,139	1,479
		Electric transformers & static converters	Existing	Transformers (both power as well as distribution) and Static Converters	202	238	331	461
		Electric Motors and Generators	Existing	Electric Motors and Generators	100	115	161	225
			New	High Efficiency Motors and Generators	-	6	13	25
3	Automobile Parts	Parts of Motor Vehicles	Existing	Part of Motor Vehicles	682	784	1,036	1,371
4	Instruments - All Types				332	516	769	1,152
		Instruments used in Medical / Surgical Applications including X Ray Machines	Existing	Medical/ Surgical Instruments, Optometry Instruments and x-ray Equipment	287	359	560	875
			New	Orthopedic Appliances, artificial parts and implants, etc.	3	3	5	8

Sr. No.	Product Category	Product/ Product Sub-category	Thrust Product (Existing / New)	Identified Thrust Products	2004-05	2005-06	2007-08	2009-10
		Analytical and Measuring Instruments	Existing	Oscilloscopes, Measuring Instruments for Electrical Quantities	28	33	48	69
5	Prime Iron and Steel				2,609	2,912	3,663	4,666
		Flat Rolled Products of Stainless Steel	Existing	Flat Rolled Products of Stainless Steel	466	574	868	1,313
6	Other Industrial Machinery :				428	537	660	813
			Existing	Printing and Processing Machines	2	3	4	5
			Existing	Transmission Shafts	10	12	17	25
			New	Electric Furnaces	15	18	28	44
7	I. C. Engines and Parts				261	392	564	813
		Various types of IC Engines			99	119	171	247
			Existing	Compression Ignition and Electrical Ignition type IC Engines	79	117	168	242
			New	Compact Engines	-	2	3	5
		Parts of IC Engines	Existing	Parts of IC Engines	227	273	393	566
8	Electric Manufactured N. O. S.				318	355	448	569
		Electric Filament or Discharge Lamps	Existing	Electric Filament or Discharge Lamps	40	50	77	121
9	Aluminium and Products thereof				471	538	711	950
		Unwrought Aluminium	Existing	Alloyed and Unalloyed Aluminium Ingots	214	256	369	531
		Aluminium plates and sheets and strip	Existing	Aluminium plates and sheets and strip including Electrolytic Grade	11	13	21	32
		Other articles of Aluminium (including foils, bars and rods, extrusions, profiles and scrap)			36	44	63	91
			Existing	Aluminium foils	29	44	60	73
			New	Can Stock	-	-	-	-
10	Other Non-Ferrous Metal and Products				811	992	1,493	2,265
		Copper and Copper Products			665	831	1,298	2,029
			Existing	Primary Copper	503	831	1,234	1,826
			New	FRC Copper, Oxygen Free Copper, High Dimension CC Rods (16 mm and above)	-	-	65	203
11	Other Chemical Plant				251	288	381	504
		Centrifuges including centrifugal dryers	Existing	Centrifuges including centrifugal dryers	210	225	282	353
			New	Machinery for working rubber or plastics	-	63	99	151
12	Electric Wires and Cables				91	108	150	209
		Electric Wires and Cables	Existing	Insulated Wires, Electric Conductors and Optical Fibre Cables	74	108	135	167

Sr. No.	Product Category	Product/ Product Sub-category	Thrust Product (Existing / New)	Identified Thrust Products	2004-05	2005-06	2007-08	2009-10
			New	Wires and Cables of Oxygen Free Copper	-	-	14.98	41.73
13	Heating & Cooling Equipment				137	168	256	390
		Refrigeration and Air-conditioning (including Commercial and Industrial)	Existing	Refrigeration and Air-conditioning (including Commercial and Industrial)	110	137	214	335
14	Tractors and Agricultural Equipment				182	206	262	335
		Tractors and Trailers	Existing	Tractors and Trailers	105	121	159	211
		Agricultural Machinery	Existing	Agricultural Machinery	18	20	24	29
15	Cranes, Lifts and Winches				40	45	57	73
		Parts suitable for use in pulley tackle and hoists and construction, excavating machinery	Existing	Parts suitable for use in pulley tackle and hoists and construction, excavating machinery	21	25	33	43
16	Industrial Castings				308	360	493	675
		Moulding Boxes for Metal Foundry	Existing	Moulding Boxes for Metal Foundry	84	101	145	209
		Transmission Shafts (incl. Crankshafts and camshafts)	Existing	Transmission Shafts (incl. Crankshafts and camshafts)	34	37	45	54
17	Steel Pipes and Tubes				283	348	532	830
		Tubes, Pipes and Hollow Profiles seamless of iron or Steel (excl. cast iron)	Existing	Seamless Pipes and Tubes of iron and steel	57	66	87	115
		Other Tubes and Hollow Profiles (e.g. Open Seam/ Welded/ Riveted/ Similarly closed)of iron/ steel	Existing	Welded Pipes and Tubes of iron/ steel	81	101	157	246
		Tube or pipe fittings of Iron or steel.	Existing	Tube or pipe fittings of Iron or steel.	73	84	110	146
		welded steel pipes of diameter greater than 40.64 mm	New	welded steel pipes of diameter greater than 40.64 mm	71	96	175	320
18	Cutting Tools				86	95	116	143
		Handsaws and blades for saws of all types	New	Handsaws and blades for saws of all types	11	14	20	28
		Grinding Stones and grinding wheels	New	Grinding Stones and grinding wheels	2	3	4	5
19	Bicycle and Parts				225	253	323	414
		Bicycles			25	29	38	50
			Existing	Bicycles	21	29	36	45
			New	High-end Bicycles	-	-	2	5
		Bicycle Parts and Others			148	170	225	297
			Existing	Bicycle Parts	124	170	213	267
			New	High-end bicycle parts	-	-	11	30

Sr. No.	Product Category	Product/ Product Sub-category	Thrust Product (Existing / New)	Identified Thrust Products	2004-05	2005-06	2007-08	2009-10
	Total (India's Engineering Exports)				13,296	15,542	20,488	27,415
	Total (India's Thrust Product Exports)				4,822	6,178	8,946	13,019
	India's Thrust Product Exports as % of India's Engineering Exports				36%	40%	44%	47%
	Total (World Engineering Imports)				2,899,118	3,006,385	3,232,973	3,476,639
	India's Exports as % of World Engineering Imports				0.46%	0.52%	0.63%	0.79%

Source: UNCTAD PCTAS Database for 1998-2002, EEPC 2003, AFF Estimates

Note: Refer Annexure-1 for detailed calculations on estimates on Future Thrust Product exports.

2.18 In line with the target for India's Engineering Products exports growth at 15% p.a., the key features of future exports are as;

- ▶ Engineering products exports are estimated to grow from **about US \$ 13.29 Bn to about US \$ 27.4 Bn** during the period 2004-05 to 2009-10 exhibiting a growth over 15% p.a.
- ▶ It is estimated that India's exports of thrust products would increase from US \$ 4.8 Bn in 2004-05 to US \$ 13.02 Bn in 2009-10 viz. share of thrust products in India's engineering exports increasing from 36% to 47% at a CAGR of about 22% p.a. during the same period.
- ▶ It is estimated that India's engineering exports in 2004-05 would account for about 0.46% of the world engineering imports. Additionally, India's engineering exports are likely to increase from this level to about 0.79% share of the world engineering imports. In case of thrust products, the share of world imports is estimated to increase from about 0.17% to 0.37% during the period 2004-05 to 2009-10.

EXPORTS OF THRUST PRODUCTS TO THRUST MARKETS (2005-06 TO 2009-10)

2.19 Exhibit 2.6 provides the estimate of India's exports of Thrust products in Thrust Markets during the period 2004-05 to 2009-10 as per the overall engineering exports growth target rate of 15% p.a.

2.20 Destination-analysis for thrust products reveal that apart from developed countries like USA, Germany, France, UK, Canada, etc., a few developing economies like China, Latin American countries such as Mexico, Argentina, Brazil, Chile and other East Asian Countries such as Malaysia, Korea, Singapore and Philippines and are likely to emerge as key importers of engineering products from India. It is estimated that the share of thrust markets in India's engineering exports for thrust products is likely to increase from about 25.29% in 2004-05 to about 33.59% in 2009-10.

2.21 As observed from Exhibit 2.6, India's share in imports of thrust product in most of the thrust markets is relatively low viz. mostly less than 1%. Hence, with focus on thrust products and thrust markets, it is estimated that India's share of imports in various key engineering importing countries like USA, Germany, France, etc. is likely to improve significantly despite lower growth rates of engineering imports for these markets.

2.22 It is also important to recognize the potential of exports to other developing markets such as Mexico and that of Latin American countries such as Brazil, Argentina, and Chile.

Exhibit 2.6

Estimate of India's Exports of Thrust Products in Thrust Markets

(Unit: US \$ Mn)

Thrust Markets		2004-05			2009-10	
		Country Imports	India Exports	India's Est. Share %	India Exports	India's Est. Share %
Key Thrust Markets						
North America	USA	313,703	990	0.32%	2,359	0.36%
	Canada	54,333	25	0.05%	53	0.07%
	Mexico	12,955	30	0.23%	65	0.36%
Europe	Germany	116,342	261	0.22%	619	0.27%
	France	69,292	71	0.10%	172	0.14%
	UK	84,428	418	0.5%	934	0.61%
	Italy	48,551	134	0.28%	277	0.32%
Asia	China	49,345	446	0.90%	1,836	0.80%
	Japan	24,490	93	0.38%	261	0.58%
	Thailand	10,173	133	1.30%	278	1.45%
	UAE	9,313	321	3.45%	1,155	4.43%
	Singapore	5,016	114	2.27%	322	2.71%
Sub-total: Key Thrust Markets		797,941	3,037		8,330	
Other Thrust Markets		95,477	326	0.34%	880	0.46%
Grand Total: Thrust Product Exports to Thrust Markets		893,418	3,362	0.38%	9,210	0.49%
India's Exports of Thrust Products in other non-thrust markets		-	1,460	-	3,809	-
India's exports of Thrust Products to the World (Thrust + non-thrust Markets)		-	4,822		13,019	
Est. Total Exports of Engg. Products from India			13,296		27,415	
Share of Thrust Product Exports to Thrust Markets in India's Engg. Exports			25.29%		33.59%	

Source: UNCTAD PCTAS Database for 1998-2002, EEPC 2003, AFF Estimates

Note: Other Thrust Markets include all the countries that have been identified as Thrust Markets for respective Thrust Products but not covered under Key Thrust Markets identified in the above Exhibit.

OVERALL STRATEGY FOR ENGINEERING EXPORTS FROM INDIA

INDIA'S ENGINEERING EXPORT BASKET

2.23 If we compare China, Mexico, Korea, Hungary, Czechoslovakia which have emerged as fastest growing engineering export countries, it is observed that 85% engineering exports were contributed by fewer product categories as compared to that of India in 2002. The number of categories contributing to 85% of the engineering exports for these countries were:-

- Mexico (10 categories, relatively medium technology/ value addition)
- Hungary (13 categories, relatively medium technology/ value addition)
- Korea (18 categories, relatively low to medium technology/ value addition)

- China (20 categories, relatively low technology/ value addition)

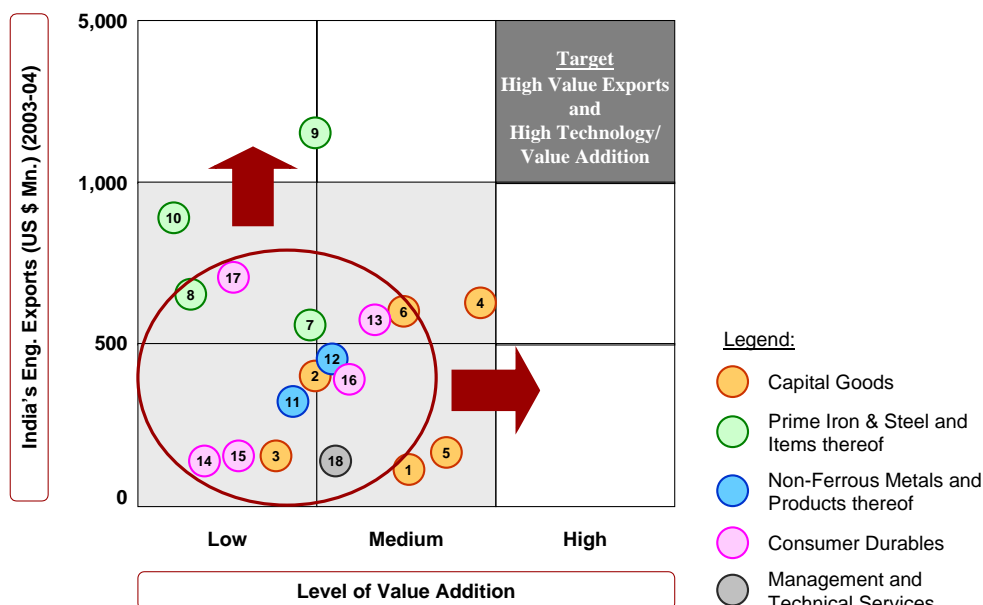
2.24 While in case of India's engineering exports, top-26 categories accounted for about 85% of India's exports in year 2002. This is primarily attributed to **low value and some medium value and fragmented** engineering export product base for our country.

VALUE ADDED PRODUCTS

2.25 Engineering exports from India currently suffer from low value addition. Typically, exports of engineering products fall in low-value addition category.

Exhibit 2.7

Export Value and Value Addition Matrix for India's Engineering Exports



Source: India's engineering export value based on EEPC data for 2003-04 (estimates)

Note: (I) Numbers in circles above represent re-classified group of categories as detailed below; (1) Tractors and Agriculture Equipment; (2) Electric Power Equipment and Parts, Wires and Cables and T. L. Towers; (3) Wagons/ Coaches and Locomotives, Coastal Vessels and Ships, Air-crafts and Aerospace Equipment; (4) Commercial Vehicles (Passenger Cars, Trucks and Buses); (5) Two/ Three Wheelers; (6) Other Capital Goods (Heating/ Cooling Equipment, Other Structures, Other Industrial Machinery, Freight Containers, Machine Tools); (7) Steel Pipes and Tubes, Ropes and Wires, Bolts/ Nuts and Screws, Electrodes, Railway Track Material; (8) Industrial/ Sanitary Casting, Forgings; (9) Prime Iron and Steel (including Pig Iron); (10) Other Iron and Steel Items (Bright Bars, SS Utensils, Razor Blades, Steel furniture, Hollowware, Other Steel Products NOS, Ferro Alloys; (11) Aluminium Metals and Products thereof; (12) Other Non-Ferrous Metals and Products thereof; (13) Auto Parts; (14) Bicycle and Parts; (15) Hand/ Cutting Tools and Files; (16) Engines, Compressors and Mechanical Pumps; (17) Other Consumer Durables (Electric Fans and Parts, Mica and Mica Products, Office Equipment, Dry/ Storage Batteries, Sewing Machines/ Needles, Electric Manufactured NOS, Scientific/ Surgical Instruments, Miscellaneous Manufactured Articles; (18) Management and Technical Services

(II) Scale represented above for India's engineering exports is non-linear.

2.26 As seen from Exhibit 2.7, currently most of the engineering products exported from India fall in low and low to medium value addition, which leads to thin margins in export markets. As a fall out of this, it can be seen that most of the product categories have reported exports less than US \$ 500 Mn. in 2003-04. Of all engineering export categories, only 2 product categories have exports exceeding US \$ 500 Mn. and they are;

- Prime Iron and Steel (incl. Pig Iron), and

❑ Commercial Vehicles

2.27 The key focus of India's engineering exports should be to increase exports of higher value-added products instead of intermediate goods/ low-value items. For example, most of the aluminium exports from India are of Ingots and to some extent rolled products. However, exports of value added products like Aluminum Foils, Aluminium rolled sheets of low thickness, and Aluminium Alloy Wheels are insignificant.

2.28 Degree of value addition is medium to high in certain Capital Goods categories like Commercial Vehicles (especially, in Passenger Cars), Tractor and Agriculture Equipment, Two/ Three Wheelers, Auto Parts, Engines, Compressors and Pumps. In most other categories value addition is low. Focusing on value added products would increase realization of exporters in export markets. As indicated in the Exhibit 2.7, India's objective should be to move towards higher value-added products with focus on increasing total value of exports of the product category in next 5 years viz. 2005-06 to 2009-10.

SHARE OF THRUST PRODUCTS IN INDIA'S ENGINEERING PRODUCTS EXPORTS

2.29 Exhibit 2.8 provides the estimated contribution of thrust products from India and its share of world imports in 2004-05.

Exhibit 2.8

Est. Share of Thrust Products in India's Engineering Exports (2004-05)

(Unit: US \$ Mn)

Particulars	Category Value	Category Share of India's Total	Product Categories	Average Exports per Product Category
Thrust Products (Existing and New)	4,822	36%	19	254
Non-Thrust Products	8,258	62%	42	197
Management and Technical Services	215	2%	1	215
Total (India's Est. Engineering Exports)	13,296	100%	62	214
Est. World Imports of Engineering Products	2,899,118			
India's Est. Share in World Imports (%)	0.46%			

Source: UNCTAD- PCTAS Database, EEPC Data and AFF Estimates

Note: Thrust products include 43 identified thrust products/ product sub-categories, which includes Existing as well as New/ Potential thrust products in 19 product categories.

2.30 In year 2004-05, India's engineering exports are estimated at about US \$ 13.29 Bn. Of this, share of thrust products (mostly existing thrust products) was about 36% (about 35% in 2003) while other products (i.e. non-thrust products and Management/ Technical services) accounted for the rest, viz. about 64% of India's total engineering exports.

2.31 It is estimated that non-thrust products would account for about 64% of the engineering exports in 2004-05. More than 40 categories would contribute to these exports, which clearly indicates that exports in this segment are fragmented and average value of exports per product category is relatively small in comparison to thrust product categories which are relatively finite in nature (i.e. 19 product categories) that would account for about 36% of India's engineering exports in the same year.

2.32 Hence, in future to achieve significant position in engineering export domain and enhance India's export performance in this sector, it is important to focus on exports and put significant effort on Thrust Products (about 19 product categories), which are finite in numbers. This would also help in channeling efforts of all stakeholders on various aspects like technology and quality improvement, enhancing scales of operations, creating adequate

supply capacity, attracting private investment (including FDI), cluster development, etc. and would enable harnessing true potential of engineering sector in export markets.

THRUST MARKETS VIS-À-VIS CURRENT MARKETS OF INDIA

2.33 Having analyzed the need for increased focus on the Thrust Products vis-à-vis the current export products basket of India from the point of view of the growth in exports it is equally important to see whether there is inadequate focus on the identified focus markets vis-à-vis the current export markets of India.

2.34 Exhibit 2.9 shows a snapshot of the comparison of India's current important markets for export of thrust products, their size and India's share and the World's top importers of identified Thrust products in 2003.

2.35 India's share of thrust products imports by thrust markets (which, accounted for about 59% of the world engineering product imports in 2003) was low (typically, less than 1% in most of the thrust markets). Collectively India's share in world imports of thrust products in existing major thrust markets was under 0.31% in the same year. On the other hand, the markets like Philippines, Chile, Saudi Arabia, etc. wherein India has high share of imports of thrust products, these markets have limited import potential and represented an insignificant percent of world imports of thrust products in 2003.

2.36 Hence in order to achieve the growth at the target rate of doubling India's engineering products exports (which amounts to a growth rate of about 15% p.a.), there is a need to focus on identified thrust markets and increase in these thrust markets over the next 5 years.

Exhibit 2.9

Snapshot of India's share of exports to identified Thrust and current Markets

Top Destinations for India's exports of Thrust Products			World's top importing countries of Thrust Products			Countries where India has highest share of Thrust Products Imports		
Thrust Countries	Share of India's Exports of Thrust Products	Share in World Imports (%)	Thrust Countries	Share in World Imports (%)	India's Share (%), in imports of that country	Thrust Countries	Country Share in World Imports of Thrust Products (%)	Share of India's exports in the Country's Imports of Thrust Products
USA	29.19%	20.58%	USA	20.58%	0.26%	Philippines	0.00%	6.03%
China	13.16%	2.65%	Germany	7.70%	0.18%	Chile	0.01%	4.20%
UK	12.20%	5.65%	UK	5.65%	0.39%	UAE	0.55%	3.23%
UAE	9.92%	0.55%	France	4.62%	0.08%	Saudi Arabia	0.04%	2.25%
Germany	7.68%	7.70%	Canada	3.83%	0.04%	Singapore	0.33%	2.03%
Thailand	4.14%	0.66%	Italy	3.26%	0.22%	Malaysia	0.19%	1.46%
Italy	3.96%	3.26%	China	2.65%	0.90%	Thailand	0.66%	1.13%
Singapore	3.67%	0.33%	Belgium	1.81%	0.15%	China	2.65%	0.90%
Japan	2.76%	1.69%	Japan	1.69%	0.30%	Australia	0.07%	0.69%
Netherlands	2.24%	1.05%	Spain	1.38%	0.08%	Korea DPR (North)	0.00%	0.67%
France	2.09%	4.62%	Netherlands	1.05%	0.38%	Turkey	0.07%	0.66%
Malaysia	1.57%	0.19%	Mexico	0.92%	0.17%	Hong Kong	0.26%	0.50%
Belgium	1.54%	1.81%	Thailand	0.66%	1.13%	Iran	0.04%	0.48%
Hungary	0.86%	0.49%	UAE	0.55%	3.23%	Indonesia	0.15%	0.39%
Mexico	0.85%	0.92%	Hungary	0.49%	0.32%	UK	5.65%	0.39%
Canada	0.77%	3.83%	Singapore	0.33%	2.03%	Netherlands	1.05%	0.38%
Other Thrust Markets	0.00%	0.00%	Other Thrust Markets	0.00%	0.50%	Other Thrust Markets	0.00%	0.19%
Total Thrust Markets	100.00%	58.74%	Total Thrust Markets	58.74%	0.31%	Total Thrust Markets	58.74%	0.31%

Source: UNCTAD PCTAS Data analysis 1998-02, EEPC Data 2003, AFF Research

THRUST PRODUCTS AND THRUST MARKETS MATRIX

2.37 The analysis of thrust products and their corresponding thrust markets in the above sections, has indicated that India's engineering exports could grow at a higher rate, by focussing on the correct mix of products and markets. Thus, going ahead, the strategy should be built on the appropriate combination of products and markets.

2.38 Exhibit 2.10 presents a thrust product and thrust market matrix, for the existing and new products and existing and new markets for the years 2004-05 and 2009-10.

Exhibit 2.10

Penetration of India's Thrust Product Exports in Thrust Markets 2004-05 to 2009-10

Thrust Products (All figures in US \$ '000)	2004-05						2009-10 (at 15% growth)					
	Existing Thrust Markets	% to India's tot. TP Exp.	New Thrust Markets	% to India's tot. TP Exp.	Total	% to India's tot. TP Exp.	Existing Thrust Markets	% to India's tot. TP Exp.	New Thrust Markets	% to India's tot. TP Exp.	Total	% to India's tot. TP Exp.
Existing	3,051,820	49.4%	232,156	3.8%	3,283,976	53.2%	8,061,882	61.9%	637,822	4.9%	8,699,705	66.8%
New	61,594	1.0%	16,635	0.3%	78,229	1.3%	471,174	3.6%	39,142	0.3%	510,315	3.9%
Total	3,113,413	50.4%	248,791	4.0%	3,362,205	54.4%	8,533,056	65.5%	676,964	5.2%	9,210,020	70.7%

Source: UNCTAD, PCTAS Database, EEPC Data on Engineering Exports 2003, AFF Estimates

2.39 Analysis of the above matrix shows that the share of the new products (although small) is expected to increase in both the existing and new markets from 2004-05 to 2009-10. But larger volume of exports is seen coming from the existing Thrust Products exports to both the existing markets and new markets. Hence, it would be important to concentrate on Existing Thrust Products in existing and new Thrust Markets in the short term to long term while building competency in new Thrust Products and exporting to existing and new Thrust Markets in the medium term and long term.

2.40 In existing thrust markets, the growth and increase in market share would come from the share of existing competitors. This is because, the existing thrust markets are developed and would experience lower growth compared to developing economies. There is potential for rapid growth in potential/ new thrust markets, where India has low market share currently. Hence complemented marketing efforts are needed in existing and especially the new markets.

Exhibit 2.11

Growth rate (CAGR) in Existing and New Thrust Products Exports (2005-10)

Thrust Products	CAGR % from 2004-05 to 2009-10 based on the target growth rate of 15% p.a.		
	Existing Thrust Markets	New Thrust Markets	Total
Existing	21.4%	22.4%	22%
New	50.2%	18.7%	46%
Total	22.3%	22.2%	22%

Source: AFF Estimates, EEPC Data on Engg. Exports 2003

2.41 Exhibit 2.11 shows the estimated growth in Existing and New Products growth rate in order to achieve the target growth rate of 15% p.a. in overall Engineering Products Exports from India. As can be seen from the exhibit the thrust products would be required to contribute a higher growth rate of about 20% p.a. over the Strategy term period from 2004-05 upto 2009-10 so that 15% p.a. overall target growth in exports can be achieved. The growth rate of new Thrust Products is expected to be much higher at 46% p.a.

INTERNATIONAL MARKETING STRATEGY

CHANGING SHARE OF INDIA'S THRUST PRODUCTS EXPORTS IN FUTURE

2.42 The share of Thrust Products in India's Engineering Products exports is estimated at US\$ 4.82 Bn (36%) in 2004-05. With the targeted growth of 15% p.a. in India's overall engineering products exports, the share of thrust products is estimated to increase to US\$ 13.02 Bn (47%) by 2009-10. Exhibit 2.12 shows the changing share of Thrust Products exports in future. Considering the optimistic potential for exports this share is expected to increase to 52% by year 2009-10.

Exhibit 2.12

Estimated Changing share of Thrust Products Exports as per Target Growth Rate

Products	2004-05	2005-06	2007-08	2009-10
Estimated Thrust Products Exports from India (US\$ Bn)	4.82	6.18	8.95	13.02
Estimated total Engineering Products Exports from India (US\$ Bn)	13.30	15.54	20.49	27.42
% share of thrust Products Exports	36%	40%	44%	47%

Source: UNCTAD PCTAS Data analysis, EEPC Data 2003, AFF Estimates

2.43 Therefore greater focus on exports of thrust products in thrust markets is required vis-à-vis the current approach, i.e. exporting identified thrust products to identified thrust markets with a focus on increasing penetration/ share in thrust product imports of these markets to achieve the overall exports target growth rate.

2.44 It is important to note that thrust products exports to thrust markets are characterised by a number of factors associated with identified products like;

- ▶ Weight of products- High weight of product means higher freight costs. This leads to geographical limitations for product exports. For example, for metal exports like copper and aluminium, India would have greater competitive advantage in Asian markets vis-à-vis Europe and Americas.
- ▶ Standards: Product related standards/ regulations can be a non-tariff barrier for exports of engineering products to a particular country. For example, high level of energy efficiency in electrical products is a key barrier for exports to developed countries.
- ▶ Technology- high technology products are typically demanded by developed economies, which are large markets for such products, while low technology products have relatively limited market size with high degree of competition

2.45 Based on above considerations, engineering exports in certain thrust markets/ non-thrust markets may be relatively more competitive vis-à-vis other markets and hence, international marketing strategy should be more product and market specific.

2.46 While increasing the focus on thrust markets, the current markets that are not part of thrust markets (mostly, developing countries) could be also be focussed upon, given that relatively low effort is required to increase exports in these markets as these markets have similar market conditions and product profile as that in India, viz. African countries (like Kenya, South Africa, etc.), SAARC countries (Nepal, Bangladesh, Sri Lanka, Bhutan), Latin America (key exporting nations are Mexico, Brazil). However, it should be noted that most of these markets do not have significant share of world imports of engineering products.

LESSER NUMBER OF PRODUCTS CONTRIBUTING TO THE SAME SHARE OF EXPORTS IN FUTURE

2.47 In year 2004-05, nineteen thrust product categories contributed to 36% share of the exports of Engineering Products from India. In future, with the targeted growth in exports, about 12 to 14 number of product categories could contribute to the same share of exports. Thus allowing for a greater focus in exports. This will also enable more focussed product-market specific strategies to be implemented.

INDIA'S FUTURE THRUST PRODUCT EXPORTS TO DEVELOPED / DEVELOPING THRUST MARKETS

2.48 Exhibit 2.13 presents the breakup of exports of thrust products from India between developed and developing thrust markets. Developed thrust markets have shown a major share of India's exports of thrust products from 2004-05 till 2009-10. India's thrust product exports to developed markets are estimated to increase in share from 0.33% to 0.43%. The share of India's exports to developed thrust country markets is seen decreased vis-a-vis developing thrust country markets from 78% to 72%.

2.49 India's share in developing markets expected to increase marginally from 0.79% to 0.81% owing to the fact that the imports of developing thrust markets have increased three times in five years.

2.50 Even though the composition of export markets (developing countries and developed countries shares) for the Indian exports is not likely to change much, but this will get more in line with world imports pattern where nearly two third of the market would be constituted by developed markets. Obviously with the higher share of developed markets in world imports and not much change in India's destination composition, the share in developed country markets would increase and marginally decrease in developing markets.

Exhibit 2.13

India's Exports of Thrust Products to Developed and Developing Thrust Markets

Classification of Thrust Country	2004-05			2009-10		
	Thrust Product Imports / All Thrust Markets' Thrust Product Imports	India's Thrust Product Exports / India's Total Thrust Product Exports to Thrust Markets	India's Market Share	Thrust Product Imports / All Thrust Markets' Thrust Product Imports	India's Thrust Product Exports / India's Total Thrust Product Exports to Thrust Markets	India's Market Share
Developed Thrust country group	89%	78%	0.33%	83%	72%	0.43%
Developing thrust country group	11%	22%	0.79%	17%	28%	0.81%

Source: UNCTAD PCTAS, EEPC Data 2003, AFF Estimates

2.51 The implication for International Marketing Strategy is that there will be a need to focus on the developed markets in terms of marketing effort and distribution set-up.

IMPORTANCE OF VALUE ADDED PRODUCTS

2.52 As mentioned earlier, India's engineering exports are currently dominated by low value-added products. Very few categories in India's export basket have medium/ high value addition. It is important to note that currently, contribution of high value added products to India's engineering exports is insignificant and estimated at less than 2 to 3% of the total exports in 2004-05. Hence, there is need to concentrate on exports of higher value-added items in each identified product category so that the contribution of value added items in India's engineering exports increases from current level to about 10 to 15% at the end of 5-year period i.e. in year 2009-10. This can be achieved by concentrating on Thrust Product categories and more exports of more value added products in these product categories.

2.53 The identified potential new thrust products have greater presence/ inclusion of more value added or higher technology products. Increasing exports of these products would help in moving towards exports of more value added products and higher technology products. Which means that we will need to build more technological capabilities and also build markets for this value added products.

MARKET RESEARCH

2.54 As mentioned earlier to effectively implement the engineering export strategy and penetrate thrust markets, market research (country specific and including market surveys as considered relevant) should be undertaken through professional/ experienced agencies in this domain as an initial step for international marketing in identified thrust products and their thrust markets to make market intelligence available to the exporters.

2.55 Structured and focused information on thrust products and thrust markets would help the exporters to direct their efforts to develop market specific products and penetrate these markets more efficiently.

BRAND PROMOTION AND PUBLICITY

2.56 As indicated earlier, India has met with limited success in the field of brand promotion and publicity for engineering exports. Brand promotion/ publicity is desired at individual thrust product level as well as India as a supplier of high-quality exporter of engineering products.

2.57 If we consider the optimistic potential rate of growth of Engineering products exports from India, then share of Consumer Durables product group is expected to increase over the strategy period term (2005-06 to 2009-10).

2.58 Keeping above in mind, International marketing strategy should be targeting to increase awareness/ visibility of thrust products in thrust markets through focussed activities like signature visits/ delegation from thrust markets to reputed Indian engineering product manufacturers, aggressively participating in large exhibitions, arranging road shows in thrust markets, etc. However, to make these events effective, experienced/ professional agencies with wide experience in event management activities should be appointed.

KEY SUPPORT ELEMENTS FOR SUCCESSFUL STRATEGY IMPLEMENTATION

2.59 The following have been identified as key support elements for successful implementation and execution of India's engineering export strategy. Their role has been detailed in the report.

- Infrastructure: - The entire spectrum of infrastructure has been covered under:-
 - ▶ Ports
 - ▶ Roads
 - ▶ Rails
 - ▶ Power
 - ▶ Special Economic Zones (SEZs)
- Technology Improvement and Capacity Enhancement
- Domestic and foreign investments in manufacturing
- Exploit the potential for Outsourcing of engineering products
- Export Finance

ACTION PLAN AND TIMELINES

2.60 As outlined in various sections there are a number of constraints and inhibiting factors that have been identified across relevant sections of this report. It is important to overcome these constraints and inhibiting factors to successfully implement the strategy proposed in this chapter and achieve overall objective of doubling the Engineering Products exports over the next five years, which corresponds to a CAGR of 15% p.a. over the next 5-years, viz. 2004-05 and 2009-10.

2.61 This section provides broad action plan and indicative timelines within, which various projects/ plans could be implemented. Exhibit 2.19 below details the same.

Exhibit 2.14

Broad Action Plan with Indicative Timelines

Sr. No.	Action Areas	Short Term (1 Year)	Medium Term (3 Years)	Long Term (5 Years)
(A)	Infrastructure			
	(1) Ports	<ul style="list-style-type: none"> ▶ Currently JNPT is the only gateway port in India, which handles 58% of container traffic. 3 Focus on reducing congestion at JNPT port 3 Increase draft at port by dredging so that larger size container vessels could be handled at the port 3 Augment capacity by upgrading container handling equipment at the port 	<ul style="list-style-type: none"> ▶ Greater focus on using other ports like Mundra, Pipavav, Chennai, Cochin through improving past infrastructure and container handling capacity. ▶ Key focus should be on reducing cycle-time once goods are in port stockyard. 3 Clear performance targets for ports should be identified and achieved in terms of throughput, waiting time for vessels, etc. ▶ Add new container terminal capacity at ports like JNPT (for example, terminal no. III and IV at JNPT) 	<ul style="list-style-type: none"> ▶ Develop world-class Greenfield container ports on west, south and east coast of India in addition to JNPT. ▶ Few port locations trust could be develop as gateway ports include <ul style="list-style-type: none"> 3 Vallarpadam (South) 3 Mundra (West) 3 Gangavaram (East) ▶ It is important to attract FDI in port sector/ private participation to improve performance ▶ Achieving global performance standards at all gateway ports in line with leading ports like Singapore, Jebel Ali, etc.
	(2) Rail	<ul style="list-style-type: none"> ▶ Greater focus on improving existing capacity/ services of CONCOR ▶ Attracting private investments in container handling services. Especially on routs connecting major manufacturing hubs <ul style="list-style-type: none"> 3 It is important to provide level playing field to private players ▶ Focus on improving/ removing bottlenecks at ICDs/ CFSs across the country <ul style="list-style-type: none"> 3 It is important to attract private investments in these areas 	<ul style="list-style-type: none"> ▶ Clear focus on reducing time required for goods movement ▶ Putting in place new infrastructure in terms of container handling equipment, etc. ▶ Ensuring that major ports are well connected with rail lines in terms of container movement/ capacity augmentation, if required ▶ New ICD/ CFS to improve container movement performance. 	<ul style="list-style-type: none"> ▶ Enhancing capacity to ensure goods/ movement are efficient so that global container movement standards are achieved <ul style="list-style-type: none"> 3 For example, Delhi - Mumbai goods should be moved in less than 24 hours with on-line container tracking facility for exporters.
	(3) Road	<ul style="list-style-type: none"> ▶ All major manufacturing hubs should be well connected by good quality roads to gateway ports 	<ul style="list-style-type: none"> ▶ Objective should be to improve existing road connecting the major manufacturing hubs with key exporting ports and ensure they are maintained well. 	<ul style="list-style-type: none"> ▶ Keep target of achieving global benchmarks for quality of roads. 3 Better quality of road would facilitate faster movement of goods by road -for example, after implementing world-class road infrastructure, Delhi Mumbai movement of

Sr. No.	Action Areas	Short Term (1 Year)	Medium Term (3 Years)	Long Term (5 Years)
				goods would be possible within 2 – 3 days.
	(4) Power	<ul style="list-style-type: none"> ▶ Set Power Capacity Addition target at the beginning to support the growth in exports ▶ Existing level of power tariff is high vis-à-vis global standards <ul style="list-style-type: none"> 3 for example, China's reported power tariff for commercial/ industrial use is within Rs. 2/ unit. 3 Power tariff to be rationalised for exporters 	<ul style="list-style-type: none"> ▶ Ensure the achievement of Target Capacity Additions <ul style="list-style-type: none"> 3 Ensure the support framework such as fuel evacuation infrastructure and ports capacity requirements are available ▶ Options of setting up distributed generation/ captive power plants for key export oriented clusters should be evaluated and policy support to be provided ▶ Quality of power should be improved. <ul style="list-style-type: none"> 3 It is important to ensure quality/ consistent power is available to exporters 	<ul style="list-style-type: none"> ▶ Overall objective in long terms should be to bring down tariff for exporting units without compromising on quality and consistency aspects of power supply. ▶ Ensure that the power capacity additions are as per the set Target
	(5) Shipping	<ul style="list-style-type: none"> ▶ Planning and encouraging National Carriers/ Shipping line 	<ul style="list-style-type: none"> ▶ National Carriers/ Shipping Liens to extend services in the region 	<ul style="list-style-type: none"> ▶ National Carriers/ Shipping Line services on the East West Trade Lane covering key Markets in phased manner
	(6) SEZs	<ul style="list-style-type: none"> ▶ Incentivise units to move towards existing SEZs 	<ul style="list-style-type: none"> ▶ Set-up port based SEZs for engineering goods at the identified gateway ports so that cycle time for exports reduces substantially. <ul style="list-style-type: none"> 3 Lead-time for importing RM/ dispatch time for exporting goods would come down drastically. ▶ Prioritise and move export oriented engineering clusters to these port-based SEZs ▶ Aggressively develop relevant infrastructure to remove bottlenecks like roads/ rail connectivity, power, water supply, etc. 	<ul style="list-style-type: none"> ▶ Long term objective is to make these SEZs completely self sufficient/ independent zones with self sustaining revenue streams to further develop/ maintain infrastructure. <ul style="list-style-type: none"> 3 Also ancillary base for the manufacturing units be moved to such SEZs viz. Hub and spoke model needs to be followed.
(B)	Technology	<ul style="list-style-type: none"> ▶ Promote strategic/ technologies joint ventures and tie-ups with leading manufacturers for thrust products ▶ It is essential to aggressively promote India as a manufacturing hub for these thrust products 	<ul style="list-style-type: none"> ▶ Objective is to move from low technology to medium technology engineering exports in medium term. ▶ Promote industry to invest in basic R&D infrastructure like <ul style="list-style-type: none"> 3 Metallurgy 	<ul style="list-style-type: none"> ▶ Give higher focus on high technology and high value added products <ul style="list-style-type: none"> 3 Exports should be of higher value added items for which technology should be in place as per medium-term plan. ▶ Continued focus on technology capital

Sr. No.	Action Areas	Short Term (1 Year)	Medium Term (3 Years)	Long Term (5 Years)
		<ul style="list-style-type: none"> 3 This would also lead to improvement in domestic manufacturing technology 3 Also manufacturing technology of domestic ancillary units supplying to such units would improve 	<ul style="list-style-type: none"> 3 Design 3 Product Development 3 Packaging ▶ Incentivise industry to invest in R&D infrastructure (capital expenses related incentive- ideally, this should be in the range of 3 to 5% of the annual sales of manufacturer) ▶ Promote joint technology development programs with premier R&D institutions in the country like IITs/ others 	<ul style="list-style-type: none"> expenditure incentives for industry, as mentioned under medium term target.
(C)	Cluster Development	<ul style="list-style-type: none"> ▶ Existing export oriented clusters of engineering products should be recognised and given infrastructure support in terms of Road/ Rail connectivity, continuous/ quality power, water supply, etc. 	<ul style="list-style-type: none"> ▶ Key export oriented engineering manufacturers/ 100% EOUs to be moved to port based SEZs 3 This model is followed by our competitors like China – for example, Schenzen SEZ in China 3 Also ancillary units supplying to these units should be re-located to these SEZs ▶ It is important to make these clusters self-sufficient by making available infrastructure support in terms of Rail/ Road connectivity power, water supply, Effluent Treatment, etc. 3 Other facilities like Testing/ Certification infrastructure is also important from engineering export point of view 	<ul style="list-style-type: none"> ▶ Long terms objective is to move export oriented units to gateway port based clusters 3 Clear targets to be defined for these clusters – gateway port based clusters to contribute about 30 to 40% of the engineering exports from the country
(D)	Raw Materials	<ul style="list-style-type: none"> ▶ Inferior quality raw materials for exports affect the quality of products significantly 3 Especially for high-end products like Automobiles which require high-quality steel to achieve good finish ▶ Such raw materials should be identified and domestic sources manufacturing to be promoted ▶ Sectoral Policy for important raw material 	<ul style="list-style-type: none"> ▶ Promote/ incentivise industry to set-up export oriented units for such raw materials so that they can cater to domestic as well as export market 3 This is important in case domestic consumption of such raw materials is not large enough ▶ Capacity additions in Steel and other raw key materials manufacturing to support the 	<ul style="list-style-type: none"> ▶ Aim to achieve the envisaged capacity additions in the production of key raw materials ▶ Incentives R&D/ technology development in of such Raw Materials ▶ It is important to collaborate with leading global manufacturers for transfer of technology 3 Competitive advantage in raw material

Sr. No.	Action Areas	Short Term (1 Year)	Medium Term (3 Years)	Long Term (5 Years)
		industry such as steel, non-ferrous metals, etc to be formulated to address the manufacturing capacity addition required to support the growth in engineering products exports	demand from engineering products exports	<p>manufacturing would lead to sustainable competitive advantage in products manufactured from these raw materials. For example, Japan, Korea has competitive advantage in various steel products including automobile, ship-building as local companies have strong competencies in Iron and Steel manufacturing</p> <p>▶ Industry and Research institutions should take active participation in joint programs.</p>
(E)	Training of Manpower	<ul style="list-style-type: none"> ▶ Labour Productivity and Workmanship is a key problem faced in engineering exports <ul style="list-style-type: none"> 3 Especially in SME sector ▶ Training programs to be developed to provide necessary training to manpower <ul style="list-style-type: none"> 3 Trained workforce with necessary skills would lead to improved quality of products 3 This would also enable exporters to meet stringent standards desired in export markets ▶ Cluster specific specialised training packages to be developed for key manufacturing clusters in association with following stakeholders; <ul style="list-style-type: none"> 3 Industry/ Industry Associations 3 Small Industry Services Institute (SISI) 3 Regional Engg Colleges/ Polytechnics 	<ul style="list-style-type: none"> ▶ Programmes aimed at labour productivity improvement and workmanship <ul style="list-style-type: none"> 3 Industry – Institute partnership 3 Key labour in thrust product industries ▶ Labour reforms could be looked at as a means to improving productivity ▶ Regional training colleges/ institutes to be set-up at key port based clusters <ul style="list-style-type: none"> 3 Programs should provide <u>certification</u> to trained engineers ▶ Set targets for improving labour productivity in thrust product industries and others to that of key competitors like China 	<ul style="list-style-type: none"> ▶ The key target of the action plan should be to improve the labour productivity in the Indian Engineering products industry to International competitive levels ▶ Continued focus on developing engineering courses/ programs that suit current requirements of engineering industry <ul style="list-style-type: none"> 3 Industry and key universities/ institutes like IITs should jointly develop courses to suit various requirements so that graduates could be readily absorbed into main-stream manufacturing activity.
(F)	Foreign Direct Investment (FDI)	<ul style="list-style-type: none"> ▶ Preparation of FDI Roadmap in Thrust Product categories <ul style="list-style-type: none"> 3 Identify investors in Thrust Product categories 3 Identify level of investment required and investors in support areas such as infrastructure, power, etc. 3 Identify the factors that would increase FDI 	<ul style="list-style-type: none"> ▶ Implementation of the Roadmap for FDI as per the medium term target <ul style="list-style-type: none"> 3 Thrust Engineering Product Industries 3 Support areas such as infrastructure, power, etc. ▶ Address the required factors that would increase investor confidence and aid in increasing the FDI 	<ul style="list-style-type: none"> ▶ The long terms action plan is to achieve increased FDI as per roadmap

Sr. No.	Action Areas	Short Term (1 Year)	Medium Term (3 Years)	Long Term (5 Years)
		and prepare plan to address them 3 Set target for FDI in Thrust Product categories		
(G)	Marketing Initiatives	<ul style="list-style-type: none"> ▶ Market Research on <u>thrust products and thrust markets</u> should be carried out with focus on- <ul style="list-style-type: none"> 3 Market size and structure 3 Key competing nations 3 Product Demand and Mix 3 Key technology and product features 3 Key entry barriers 3 Standards and Regularities 	<ul style="list-style-type: none"> ▶ Special market access schemes should be developed for various thrust products and thrust markets after taking into consideration views from key exporters/ manufacturers ▶ Marketing/ promotion initiatives should support the efforts of exporters by generating favourable environment in thrust markets for thrust products ▶ Regional/ country specific offices and support staff is necessary for penetration of thrust products in thrust markets. 	<ul style="list-style-type: none"> ▶ Overall objective should be to create favourable environment for engineering exports from India ▶ Competitive advantage would be developed by local presence and better after sales support services/ initiatives ▶ Focus should be on continuously upgrading local presence in terms of marketing offices and able after sales support network in terms of dealers/ distributors in thrust markets for thrust products.

ROLE OF VARIOUS BODIES

CENTRAL GOVERNMENT

2.62 The central government is the chief responsible body that can promote export growth in the near future. It is critical for the central government to play a key role in the following areas:

Foreign Trade Policy

- ▶ The New Foreign Trade policy announced by the UPA government in 2004 for the first time integrated trade policy with the process of the country's economic development.
- ▶ The following strategies have been spelt out in the policy document:
 - 3 Procedures simplification
 - 3 Deregulation
 - 3 Reduction in transaction costs
 - 3 Facilitating the development of India as a global hub for manufacturing, trading and services
- ▶ The Government should see to it that the benefits of these policies and strategies are available to the exporters through effective implementation of the same.
- ▶ The issue of policy on Labor reforms does not impart flexibility to exporters of engineering products. It is important that the GOI documents a clear-cut policy on this issue. This would encourage exporters and other manufacturers to commit effort and resources to improve performance.
- ▶ The competitiveness of the exports from India depends on the availability of raw material at internationally competitive prices. Therefore, it is necessary to have a "**Raw Material Policy**" that will ensure the supply of raw material to exporters at competitive prices. This measure has become all the more important given the significant rise in input costs in the form of rise in steep prices of pig iron etc. over the last couple of years.
- ▶ In the year 2003-04, 31% of the total engineering exports came from Small Enterprises. The foreign trade policy should research and make available WTO compatible export incentives to SME's. This obviously should be in line with India's WTO commitments.

Trade Agreements

- ▶ The Central Government should ensure that the industry has meaningful representation in formulation and negotiations of Trade agreements with partnering countries/ Trade Blocks.
- ▶ Trade agreements should be planned with a larger perspective rather than signing them on a one to one basis. With this understanding, the Central Government could strategise and hasten the process towards becoming members of important trade blocks such as ASEAN with an objective of increasing exports of Engineering Products

Infrastructure

- ▶ India needs very large investments in infrastructure, both social and economic, rural and urban to step up the rate of GDP growth to 7% to 8% p.a. The economy must therefore absorb very large investment in infrastructure over the next decade for us to be able to increase our growth rate. A large part of this needs to come from foreign direct investment. The government over the years has assigned industry status to infrastructure. Commitment of funds to infrastructure has increased with time. The

infrastructure issues range from ports, rail, roads, power, etc. All this is important not only from the point of view of reducing transaction costs, but also from the point of view of promoting a positive image of India abroad to do business. Discussion with the exporters revealed that if issues related to documentation and infrastructure were sorted out, the transaction costs could come down by 10%-15%.

- ▶ In power sector alone in order to sustain an annual growth rate of over 7% p.a. an estimated capacity addition over 10,000 MW per year is needed
- ▶ Creating and operationalising port based SEZs with world class infrastructure and attracting FDI in Thrust Products manufacturing for exports in the SEZs is very important
- ▶ The government can arrange focussed road shows for attracting the export oriented foreign investment in Thrust Product categories and promotion of SEZs.

□ Foreign Direct Investment

- ▶ FDI has a significant role to play in the development of an export-oriented economy. The success of China's exports is a pointer in this direction. As discussed above for the development of manufacturing and infrastructure to support the growth in GDP and exports India needs very large investments and much of this must come in as Foreign Direct Investment. The central government could have a FDI roadmap to prepare foreign investors in identified thrust product categories in advance of the emerging investment potential in India. The government has a role to play in making India attractive destination for FDI and create an environment conducive to the growth of spirit of adventure and enterprise. As an example, the Indian bureaucracy continues to slow down things. According to a World Bank "Investment Climate Assessment" report published last year (2004), it takes about 89 days to secure all the permits needed to start a business in India compared with 41 days in China. This shows that there is a need to simplify procedure and time taken to process the FDI related matters.
- ▶ The potential growth of outsourcing by foreign companies is a sign of the confidence of the foreign investors in India and it needs to pick up momentum.

□ Sectoral Policies

- ▶ The following sectors of the country require a long-term policy document that outlines with specific measurable results – for example 2010 vision document. Sectors that need to be covered include;
 - 3 Steel – (e.g. to target over 100 Mn Tonnes of annual consumption at end of next 10 to 15 years)
 - 3 Automobile
 - 3 Power
 - 3 Shipping: - In order to have complete control on exports from India, the importance of a National Carrier and a Shipping Line cannot be underestimated. A national carrier shipping policy will impart leverage to Indian exporters by reducing dependence on multinational shipping lines. At the moment, most of the trade happens through feeder vessels. With a shipping line policy in place, the Central Government could then develop a mother vessel policy to improve the volume of Indian exports.
- ▶ Along with the Sectoral Policies, the Government should establish research institutions for thrust product categories. An example in case is the dearth of institutions like Automobile Research Association of India (ARAI) and the test facilities. The domestic automobile industry is already facing shortage of test facilities for testing and certification.

India Promotion

- ▶ This is an extremely critical responsibility that is under the onus of the Central Government. The government is doing its part in enabling this aspect.

Indian Embassies / Trade Missions abroad

- ▶ The Government should encourage Indian Embassies / Trade Missions in Thrust markets abroad to be more responsive to the request by exporters for information, help and required assistance, especially by the SMEs.

Taxation

- ▶ Introduction of VAT will simplify the multi-level taxation structure
- ▶ It will also help in speeding up freight as lorries would no longer have to stop at the state borders

Exchange Rate Management

- ▶ This issue has been under the purview of RBI. A market-adjusted exchange rate is a reality now and encourages exporters to resort to foreign exchange instruments to manage their foreign exposure.

Labour Reforms

- ▶ Labour reforms should be viewed by the government as a means of increasing the labour productivity and should be addressed in that manner. Labour Reforms are needed in order for India to become competitive internationally w.r.t. its competitors like China and also in attracting Foreign Direct Investments

Partnership with Exporters

- ▶ In the area of project exports particularly, government could step in as a re-insurer.
- ▶ The government should make efforts in bringing in 'Exports' as focus among industry sectors

Incentives to Promote SMEs

- ▶ The Government should earmark some incentives which are WTO compatible and can be provided to the SMEs, e.g. Capital Subsidy @ 1% of the exports made by the SMEs or @ 1% of the export performance made by the engineering sector for export promotion of SME products.

ENGINEERING EXPORT PROMOTION COUNCIL (EEPC)

2.63 EEPC has a critical role to play in putting in place enablers for growth of engineering exports:

Executive Powers

- ▶ As an apex body for promoting engineering exports, it is important for the council to have a forum to have the queries of its members answered and resolved.
- ▶ EEPC should be take up a proactive role in networking with government agencies and ensure that it has its say in the policy formulation at central level
- ▶ EEPC Experts should be involved by the Government in addressing WTO related issues and strategy

Thrust Product and Market Initiative

- ▶ EEPC, along with its members, could adopt focussed thrust product and market initiatives to drive export growth. The benefits could be the following:

- 3 Business potential and customer information to exporters
- 3 Awareness in thrust markets of Indian potential
- 3 Dissemination of information to other members
- 3 Information on product requirements in foreign markets for the benefit of exporters

❑ **Exporter Related Matters**

- ▶ EEPC could adopt the following initiatives to help exporters:
 - 3 Knowledge Management of the experience of exporters for the benefit of other exporters
 - 3 Information dissemination to exporters on the Lines of Credit in operation and availing benefit of them
 - 3 Time bound grievance redressal

❑ **SME Initiative**

- ▶ EEPC should arrange industry specific training for SMEs with focus on thrust products and markets, in areas that need improvement. Further, EEPC could also look at the possibility to represent the products of SME sector internationally. More importantly, help should be provided in terms of market intelligence for various products in thrust markets viz. size, structure and growth, regulatory and standards related information, key competitors, products desired and key characteristics, etc.
- ▶ Training on export benefits / schemes, procedures and availing the benefits to SMEs.
- ▶ Training for the perspective and vision for SME Exporters

❑ **Regional Meetings**

- ▶ The regional meeting is an important forum to recognize the issues facing exporters. EEPC could put in place a mechanism to tap and resolve all major issues in a time bound manner. A dedicated team in EEPC with the Chairman as the Head could ensure that the concerns and ideas of engineering exporters are taken care of

❑ **Foreign Offices**

- ▶ Currently, EEPC has local/ regional presence through its four international offices in following countries, viz. USA, Germany, Singapore and Nigeria. However, EEPC should aim at increasing local presence in thrust markets by setting up offices in the identified thrust markets or at least regional offices catering to a group of thrust markets. It is suggested that EEPC should examine the feasibility of establishing a local office in the following key markets;

Americas

- 3 Canada
- 3 Mexico

Europe

- 3 United Kingdom
- 3 France

Asia

- 3 China

- 3 Japan
- 3 Korea
- 3 Malaysia

- ▶ EEPC foreign offices should be accessible to small and medium exporters
- ▶ Apart from disseminating the market and product information these offices can provide other important information such as availability of cheaper (lower prices than that from India) raw materials from foreign markets, local standards, etc.

Joint Sessions and co-operation with other Councils and Industry Associations

- ▶ Joint meetings and sessions of EEPC with various export councils and other Industry Associations will help in co-ordination of export promotion and acquiring learning from other councils. This would not only avoid duplication, but also lead to improved productivity in export related matters.

Infrastructure

- ▶ This issue is critical to almost all exporters. The team of councils could work with the central and state government to direct efforts productively towards infrastructure development. EEPC would need to proactively undertake making presentations/ conducting workshops to relevant bodies to make them aware/ sensitise them on the need for significant enhancement in availability of quality infrastructure, availability of critical materials, etc. needed by the exporters to achieve the target of doubling the engineering products exports in the next five years.

ENGINEERING EXPORT PROMOTION COUNCIL (EEPC) – KEY ROLES

2.64 The following are among the key roles that have been identified for EEPC: -

- Annual study of the thrust markets' regulations and business practices in the engineering segment. This shall provide valuable inputs in the formulation of relevant Indian policies for export promotion and also enable dissemination of useful information to Indian exporters
- One stop-shop for engineering firms interested in investing in India. EEPC could help firms find Indian partners and advise them on investment opportunities.
- Operate Business Support Centers
 - ▶ To provide companies with free office space for a limited for buyer-seller transactions, during trade and factory visits, etc.
 - ▶ To provide cost-effective commercial intelligence to members.
 - ▶ Web – based trade tie-up promotion program will help match Indian and foreign firms with similar interests.
- Operate foreign offices as mentioned earlier;
 - ▶ For international services to Indian members
 - ▶ To facilitate trade measures.
 - ▶ Educate international firms of business customs and practices in the Indian market.
- Liaison with other trade promotion councils in the Thrust Markets that are involved with supporting industries in developing nations to enhance their exports.**
- Promote and review Foreign Direct Investment in different engineering sectors.

- Support import of world-class capital goods for the engineering sector.
- Assist foreign subsidiaries of Indian companies to grow their share in the global engineering market.
- Seek and activate involvement of various commercial attaches of Government of India in foreign countries for effectiveness in trade promotion.
- Organize international exhibitions in thrust markets and arrange participation of Indian engineering companies in similar events overseas.
- Undertake trade missions primarily for SME's
- Operate Buyer Service Centers where buyers visiting India can receive assistance in business meetings with Indian companies and collect information on Indian engineering products and suppliers.

BROAD ROAD MAP FOR THRUST MARKET SPECIFIC STRATEGY

2.65 Proposed broad road map for thrust market specific strategy is presented in the Exhibit 2.15, based on the secondary research, trade data analysis, identification of thrust products and thrust markets and primary survey carried out in India. However, detailed thrust market – thrust product specific strategies would need to be formulated based on thrust product-market specific market research in these markets.

Exhibit 2.15
Proposed Broad Road Map for Thrust Market Specific Strategy

Continent	Continent/ Trade Block/ and Important Focus Country	Non-tariff Barriers	Prominent Thrust Product Groups (Existing / New) as per EEPC Categories	Short Term Export Strategy	Medium Term Export Strategy	Long Term Export Strategy	Govt. Support needed	EEPC Role in implementing/ achieving target growth and special suggestions, if any.
North America (NAFTA)								
	USA	American Quality Standard, Buy American Act	TPs in Capital Goods and Consumer Durables Category, Prime Iron & Steel (Auto parts, parts of IC engines, Electrical Transformers, medical and surgical instruments, plastics and rubber processing machinery)	Highly Competitive Market: State specific Market Surveys, Increase Visibility through sustained Promotion campaigns	1) Increased emphasis on visibility 2) Sustained Promotional Programmes 3) Encourage investments in India based manufacturing and buy back 4) Local warehousing and distribution	1) Acquisition of smaller firms in specific industries such as auto components for gaining access to customers n USA 2) Ensure increased availability through Distribution Network	1) Assistance in representations against Anti- dumping cases 2) Steps in signing special treaties with respect to Trade Block	1) Use of local office in collecting and spreading information on buyer requirements in TP categories.
	Mexico	!00% inspection in cases, Local content and labour related issues, Labeling Requirements	Capital Goods and Consumer Durables (Auto components, Diesel Engines, bicycles and parts, two wheelers, Transformers, etc).	1) Buyer Seller Meets, Demonstration of engineering manufacturing capabilities, Trade Visits to India. 2) NTBs could be lowered by holding Bilateral	Aim for Reciprocal Tariff Preferences and move to agreement with NAFTA, Encourage Indian Companies with product specific tie-ups such as	1) Ensure long terms supply arrangements, 2) FTA With NAFTA/ Mexico 3) Product specific service support	1) Bilateral Talks in resolving NTB related issues 2) Steps in setting up Trade Agreement with NAFTA/ Mexico	EEPC should look at the feasibility of opening up of a local office in Mexico in the medium term as it would be helpful in increasing the exports to Mexico. Market Specific information can be

Continent	Continent/ Trade Block/ and Important Focus Country	Non-tariff Barriers	Prominent Thrust Product Groups (Existing / New) as per EEPC Categories	Short Term Export Strategy	Medium Term Export Strategy	Long Term Export Strategy	Govt. Support needed	EEPC Role in implementing/ achieving target growth and special suggestions, if any.
				Talks. 3) Encourage Indian Firms to set up local warehousing and distribution set up	for Automobiles and parts exports, electrical equipment, machinery with tailor made automation			provided by EEPC to exporters.
	Canada	Quality Standards and Inspection, Goods and Services Taxation (GST), Import Control Regulations for select products such as steel	TPs in Capital Goods and Consumer Durables Category, (Auto Components, Parts of IC Engines, Plastics and Rubber Processing Machinery, etc.)	Similar to that for USA	Similar to that for USA	Similar to that for USA	1) Assistance in representations against Anti- dumping cases 2) Steps in signing special treaties with respect to Trade Block	EEPC should look at the feasibility of opening up of a local office in Canada in the medium term as it would be helpful in increasing the exports to Canada. Market Specific information can be provided by EEPC to exporters
Europe (Mainly EU members)								
	Germany	DIN and environmental norms, Labeling Requirements, Frequent changes in regulations to suit domestic suppliers, German Packaging	Capital Goods, Non-ferrous metals and articles thereof, (Auto Parts, Transformers, Aluminium and products, etc.)	1) Demonstra- tion of high quality manufacturing and engineering capability 2) Increased Participation in Specialised Trade Fairs 3)Buyer visits to India	1) Sector specific long term buyer-seller arrangements 2) Competitive information gathering on the market price, etc. and from competitor countries, esp. in the EU.	1)Product specific distribution and service support 2) expansion to export in the EU	1) Assistance in participation in Trade Fairs, 2) Negotiations with EU on NTBs	1) Use of local office in collecting and spreading information on buyer requirements in TP categories. 2) Competitive market information and NTB specific information, etc.

Continent	Continent/ Trade Block/ and Important Focus Country	Non-tariff Barriers	Prominent Thrust Product Groups (Existing / New) as per EEPC Categories	Short Term Export Strategy	Medium Term Export Strategy	Long Term Export Strategy	Govt. Support needed	EEPC Role in implementing/ achieving target growth and special suggestions, if any.
		Rules add too much cost		4) Thrust Product Specific Market Surveys	3) Assessment of opportunity of relocation of units in mechanical, transport electrical power sector to meet the regional export demand in Asia			
	UK	Standards, Packaging and Labeling Requirements	Capital Goods, Consumer Durables (Auto Parts, Tractors, Agri. Machinery, Plastics/ Rubber Processing Machinery)	1) Buyer Seller Meets including the Trading Houses, Confirming Houses, etc. 2) Thrust Product Specific Market Surveys 3) Participation in Specialised Trade Fairs	1) Closer Interaction of the Joint Economic and Trade Committee (JETCO) between two countries to develop business led vehicles to enhance bilateral trade and investments 2) Explore exports to African Markets through Trading Houses in UK because of their already established trade links	1) Encourage E-Commerce/ Web based interactions in trade especially when intermeditation by Third Parties in distribution is involved 2) Identify the products for which local manufacturing industries are on the decline and the products are still exported in large quantities and target those products for exports 3) Also, the	Closer Interaction of the Joint Economic and Trade Committee (JETCO) between two countries to address trade development and issues related to NTBs	EEPC should look at the feasibility of opening up of a local office in the UK in the medium term as it would be helpful in increasing the exports to UK. Market Specific information can be provided by EEPC to exporters, EEPC can ensure enhanced participation in the specific Trade Fairs and Buyer-Seller Meets

Continent	Continent/ Trade Block/ and Important Focus Country	Non-tariff Barriers	Prominent Thrust Product Groups (Existing / New) as per EEPC Categories	Short Term Export Strategy	Medium Term Export Strategy	Long Term Export Strategy	Govt. Support needed	EEPC Role in implementing/ achieving target growth and special suggestions, if any.
						manufacturing could be relocated to India for catering to exports in the Asian region		
	France	Standards, Labeling Requirements, CE Markings, "Environmentally Sound Production" (ESP) requirements in some cases	All Thrust Products, mainly Consumer Durable and Capital Goods and Non-ferrous Metals (Auto Parts, Commercial Vehicles, Non-ferrous metals and products, Instruments, Tractors/ Trailers, Transformers, electric drives)	1) Demonstration of high quality manufacturing and engineering capability 1) Buyer Seller Meets including the Trading Houses, Confirming Houses, etc. 2) Thrust Product Specific Market Surveys 3) Participation in Specialised Trade Fairs	1) Joint Ventures for Exports promotion, 2) Competitor mapping and matching product range with competitors 3) Strengthening the Distribution channels 4) Long Term Supply Contracts 5) Country Level Bilateral Talks for facilitating trade and resolving issues on Trade Barriers	1) Encourage E-Commerce/ Web based interactions in trade especially when intermediation by Third Parties in distribution is involved 2) Identify the products for which local manufacturing industries are on the decline and the products are still exported in large quantities and target those products for exports 3) Also, the manufacturing could be relocated to India for catering to exports in the Asian region	Same as other EU Countries	EEPC should look at the feasibility of setting up of a local office in France in the medium term as it would be helpful in increasing the exports to France. Market Specific information can be provided by EEPC to exporters. EEPC can ensure enhanced participation in the Trade Fairs and Buyer-Seller Meets

Continent	Continent/ Trade Block/ and Important Focus Country	Non-tariff Barriers	Prominent Thrust Product Groups (Existing / New) as per EEPC Categories	Short Term Export Strategy	Medium Term Export Strategy	Long Term Export Strategy	Govt. Support needed	EEPC Role in implementing/ achieving target growth and special suggestions, if any.
	Italy	Standards, Labeling and Packaging, Instances of assessment of pension related laws of suppliers, absence of clear-cut norms on inspection and rejection	All Thrust Products, Mainly Consumer Durables, Non-ferrous metals (Auto Parts, Heating and Cooling Eqpt., Instruments, Plastics and Rubber Processing Machines, Aluminium and Copper and Products thereof)	Need to increase visibility and quality image to overcome extreme visibility of Chinese and Brazil Products. Organise Road Shows, Buyer-Seller Meets, Exhibitions, esp. in the "Po" area of Italy.	1) Joint Ventures for Exports promotion, 2) Competitor mapping and matching product range with competitors 3) Strengthening the Distribution channels 4) Long Term Supply Contracts 5) Country Level Bilateral Talks for facilitating trade and resolving issues on Trade Barriers	1) Encourage E-Commerce/ Web based interactions in trade especially when intermediation by Third Parties in distribution 2) Aim for Targeted growth achievement by close monitoring of the export performance	Same as other EU Countries	Market and Competitor specific information can be gathered by the EEPC offices in the neighbouring Countries. EEPC could ensure higher participation in Trade Fairs and Buyer Seller Meets
	Other European Thrust Markets: Belgium, Spain, Netherlands , Hungary	Similar to the other EU countries	Thrust Products in the Consumer Durables, Capital Goods, Non-ferrous metals prod groups (Esp. Auto parts, Commercial Vehicles, Aluminium Foils, Insulated Wires and	Same as other EU Countries	Same as other EU Countries	Same as other EU Countries	Same as other EU Countries	Same as other EU Countries

Continent	Continent/ Trade Block/ and Important Focus Country	Non-tariff Barriers	Prominent Thrust Product Groups (Existing / New) as per EEPC Categories	Short Term Export Strategy	Medium Term Export Strategy	Long Term Export Strategy	Govt. Support needed	EEPC Role in implementing/ achieving target growth and special suggestions, if any.
			Cables, Transformers, Elect. Motors and Generators, instruments, etc.)					
Asia								
	China	Requirement in cases that Foreign suppliers establish joint ventures with local Firms, language barrier, technology transfer related requirements, Rigid banking system and difficulties in LC related matters	Thrust Prod Categories in Capital Goods and Prime Iron and Steel and Non-Ferrous Metals and products thereof (especially machinery for processing plastics and rubber, Flat Rolled Products of Stainless Steel and Steel, steel pipes and fittings, Primary Copper, Aluminium Foils, Transformers, parts of Pulley, Hoist and tackle and for use in construction machinery, Insulated Wires	1) Develop Understanding of the Market and the export related procedure, requirements through product-market specific studies, 2) Liaise with Provincial Governments and Business Community in TP Categories, 3) Participate in Trade Fairs in China 4) Identify product "niches" in which India has quality as well as price advantages	1) Establishing local office/ representative office would be advantageous 2) Liaise with major multinationals with investments in China to know their requirements and specifications for supplying parts for their operations in China and other parts of the world. 2) Explore potential for production and marketing in a third country through Joint Ventures with Chinese	1) Establish Long Term Supply relationships 2) Government level bilateral talks for higher levels of trade facilitation 3) Increase third country export opportunities, Strengthen product distribution network	1) Help in establishing and strengthening cooperation and trade between bordering states such as Yunnan Province and West Bengal. This can save in transportation cost as well.	EEPC should explore the feasibility of setting up of a local office in China. EEPC can increase the Dialogue with China Council for Promotion of International Trade (CCPIT) in increasing the exports to China, Organising Buyer-Seller Meets. EEPC can provide product, market and competitive information to the exporters.

Continent	Continent/ Trade Block/ and Important Focus Country	Non-tariff Barriers	Prominent Thrust Product Groups (Existing / New) as per EEPC Categories	Short Term Export Strategy	Medium Term Export Strategy	Long Term Export Strategy	Govt. Support needed	EEPC Role in implementing/ achieving target growth and special suggestions, if any.
			and Elect. Conductors, IC Engines and parts, Auto Parts, Instruments, etc.)		partners 3) Move towards exporting higher value added products			
	Japan	Problems in obtaining Technical Rules, Standards and Regulations, Occurrences of frequent changes in regulations to protect domestic industry	Capital Goods, Consumer Durables, non- ferrous metals and products thereof (especially Parts of IC Engines, medical and surgical instruments, transformers, aluminium ingots and foils, Primary Copper, CC Rods, wires and cables of oxygen free copper, etc.)	1) Thrust Product specific Market Research 2) explore export opportunities through exploring with the Japanese Trading Houses and Multinationals for local and Asian / regional export requirements 3) Participation in Road Shows and Trade Fairs 4) Bilateral level Dialogue in trade facilitation and reducing non-tariff barriers	1) Explore Third Country Export Opportunities through the joint ventures with Japanese manufacturers in exporting to third countries 2) Competitor mapping and matching product range with that of the competitors with attractive pricing 3) Facilitate Technology Transfer 4) Establish local presence through representative offices	1) Ensure Long Term supply relationships 2) Move towards exports of higher value added products	Trade facilitation through bilateral level talks and reduction of non- tariff barriers	EEPC should explore the feasibility of setting up of a local office in Japan, which will help in increasing the exports to Japan. EEPC could provide information to the exporters on the standards and procedures in exports to Japan as well as product-market and Competition information.
	Thailand	Standards and Labeling in	Capital Goods, Consumer	1) Market Research for	1) Explore possibility of	1) Move towards more value	Help needed in addressing	The EEPC office in the region in

Continent	Continent/ Trade Block/ and Important Focus Country	Non-tariff Barriers	Prominent Thrust Product Groups (Existing / New) as per EEPC Categories	Short Term Export Strategy	Medium Term Export Strategy	Long Term Export Strategy	Govt. Support needed	EEPC Role in implementing/ achieving target growth and special suggestions, if any.
		certain product categories incl. Medical devices, Severely Strict Emission norms on two wheelers, However recent FTA signed with Thailand has facilitated trade	Durables, Prime Iron and Steel, Non-ferrous Metals and products thereof (Auto Parts, Machinery for processing rubber and plastics, medical and surgical instruments, Flat Rolled products of stainless Steel, IC Engines and parts, Primary Copper and aluminium, etc.)	specific product categories 2) Participation in trade fairs and exhibitions 3) Matching product requirements with offerings	exports to other South East Asian/ regional countries with which Thailand has trade agreements 2) Possible set up of manufacturing in Thailand for local demand and to export to the region 2) Take advantage of sourcing possibilities of components and parts to be used in exports of final products	added product exports 2) Improve overall manufacturing competitiveness in relation to that of Thailand	product specific disabilities in the form of high import duty on raw materials, inverted duty structure issues, high infrastructure services cost and cost of finance to be able to compete and take advantage of the FTA.	Singapore can gather market and Competitor specific information. EEPC could ensure higher participation in Trade Fairs and Buyer Seller Meets
	UAE	local labour usage requirements local project work, Local sponsor requirement, Foreign principals need to distribute their products only through national	Capital Goods and Consumer Durables, non-ferrous metals and articles thereof, (commercial vehicles, automobiles and auto parts, copper and aluminium, and medical and	1) Thrust Product specific market assessment 2) Competition profiling is required as it is a highly competitive market 3) Explore Trading opportunities for	1) Explore and strengthen project export opportunities, register with the local firms, technical consultants and approval authorities, 2) Spread project exports to GCC countries with	1) Establish Long Term Supply relationships 2) Monitor and achieve product specific targets	Government level bilateral talks for higher levels of trade facilitation especially related to NTBs for Project Exports	Help to the exporters in terms of Project Export Opportunities and help in getting together to offer complementing skills in bidding for project exports

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		commercial agents who are either UAE nationals or companies and on appointing they have special rights	orthopedic instruments, moulding boxes for foundry, electrical products, bicycles and parts, machinery for processing rubber and plastics, handsaws and blades etc.)	the region with the UAE as the base	UAE as the base			
	Singapore	The recently signed Comprehensive Economic Co-operation Agreement on 29 th June 2005, eliminate duplicative testing and certification procedures in specific sectors, The CECA encompasses a review of the existing Avoidance of Double Taxation	Thrust Products in Capital Goods, Consumer Durables, Prime Iron and Steel and products thereof, Non-ferrous Metals and products thereof groups (Medical and surgical instruments, IC Engines and parts, Aluminium flat products and foils, steel pipes and tubes, Printing and	1) Market Research with respect to the Thrust Products and that common under CECA, with an added focus on regional export opportunities 2) Trade Fair Participation and Buyer Seller Meets to increase visibility and presence to the levels of the dominant Chinese presence so far	1) Leverage on Singapore's strength in Finance, Marketing, Manufacturing and advanced electronics. Joint ventures and investments in India for production for exports, incl. Investments in Indian SEZs. 2) Expand exports to other regional and ASEAN countries with Singapore as the	1) Close Monitoring to achieve thrust product specific export Targets 2) Explore and take advantage of the Project Export Opportunities in the South East Asia with Singapore as the base. Project Export companies could set up regional offices to take the benefit of such opportunities 3)	1) Govt. to ensure (through continuous monitoring and dialogue) that the benefits of the CECA are actually available and Indian engineering exporters are being benefited 2) Use the success of the CECA with Singapore in furthering integration and growth in exports with ASEAN Trade Block countries 3)	With a local office in Singapore, EEPC is in a good position to help the Indian exporters in terms of export opportunities and joint venture, technology transfer related aspects, project export opportunities in the ASEAN countries.

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		Agreement	processing machines, etc.)	3) Micro Buyer- seller meets at short notice depending upon market situation of spot shortages	base	Encourage E- commerce /Web based interactions in trade especially when intermediation by Third Parties in distribution	Encourage FDI under CECA in infrastructure and manufacturing	
	Hong Kong	Relatively less onerous to comply with the Labeling Requirements	Thrust Products in the TP-TM category of Capital Goods, Consumer Durable, Non- Ferrous Metals and Articles thereof (especially medical, surgical and measuring instruments, copper and aluminium rolled products, electrical products, etc.)	1) Increased visibility through one to one buyer seller meetings, especially with the trade and re-exporters 2) assess added opportunities of exports to Main Land China	1) Explore Joint Ventures opportunities through "Invest Hong Kong" initiative of the HK Govt. and through active dialogue with companies in Hong Kong in export oriented manufacturing set up. 2) Expand exports to the regional and ASEAN Countries	1) Establish long term supply relationships and monitor target and performance of exports to achieve the growth 2) Encourage investments in India in infrastructure and high technology export oriented manufacturing, incl. that in the SEZs 3) Encourage E- Commerce/ Web based interactions in trade especially when intermediation by Third Parties in distribution	1) Negotiations in integrating and growth in exports with ASEAN Trading Block 2) Encourage FDI under CECA in infrastructure and manufacturing	The EEPC office in the region in Singapore can gather market and Competitor specific information. EEPC could ensure higher participation in Trade Fairs and Buyer Seller Meets

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	Malaysia, South Korea	Standards and conformance related NTBs	Mainly Thrust Product Categories in Capital Goods, Consumer Durables and Non-ferrous Metals and articles thereof, Prime Iron and Steel and products (Especially Transformers, aluminium rolled products and primary copper, Steel Pipes and Tubes incl. Large diameter pipes, etc.)	1) Thrust Product specific Market Research 2) Increased visibility through one to one buyer seller meetings	1) Explore Project Exports opportunities 2) Sustained efforts in exports 3) explore third country regional export opportunities	1) Monitor targets with achievement in order to take any corrective actions 2) Encourage E- Commerce/ Web based interactions in trade especially when intermediation by Third Parties in distribution	1) Negotiations in integrating and growth in exports with ASEAN Trading Block	Market and Competitor specific information can be gathered by the EEPC office in the region in Singapore. EEPC could ensure higher participation in Trade Fairs and Buyer Seller Meets
	Russia	Long Delays in Customs Clearance, Need for reliable partners and consulting companies for advice on registration and certification issues	Mainly Capital Goods and Consumer Durables (Motor Vehicles and parts IC Engines and Parts, Pumps, Construction and Earthmoving Machinery, Electrical Transformers,	India is in an advantageous position because of the Historical ties with Russia. Thrust Product specific Buyer – Seller Meets Trade Fairs could be arranged to identify areas of bilateral trade	1) Make effective use of the Exim Bank Lines of Credit 2) Spread Exports to the other CIS countries through third country opportunities 3) Explore Project Export Opportunities	1) Project export opportunities can be expanded in the CIS region 2) Strengthen Distribution channels	1) Establishment of the “North – South Transport Corridor” 2) Regular Dialogue and review to achieve trade growth through “Focus CIS Programme”	Arrangement of Buyer Seller Meets and Trade Fairs, Assistance to exporters in Project Export Opportunities

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			Ferro Alloys, etc.)	and investment with a dialogue between the businesses directly	4) Establish local presence through representatives 5) Establish Distribution Channels			
Australia								
	Australia	Anti-dumping Laws, Labeling and Standards	Consumer Durables, Capital Goods, Prime Iron & Steel Products (esp. Automobiles and Parts, IC Engines and Parts, Heating and Cooling Eqpt. instruments, Stainless Steel Flat Products, etc.)	1) Thrust Product specific market assessment 2) Competition profiling is required 3) One to One Buyer Seller Meet and Trade Fairs	1) Strengthen local representation/ distribution and presence 2) Develop Long Term Supply Relationships	Increase regional presence through third country export opportunities, e.g. Indonesia	Trade facilitation through bilateral level talks and reduction of non-tariff barriers	Market Specific information can be provided by EEPC to exporters, EEPC can ensure enhanced participation in the specific Trade Fairs and Buyer-Seller Meets
Latin America								
	Argentina	a) Strict regulations regarding Safety and industrial standards b) Tedious customs clearance procedures.	Thrust Products in Capital Goods Category (Especially in Refrigeration and Air-conditioning including Commercial and Industrial,	1) Commercial interaction, visits of businessmen both ways, and trade promotion measures including participation in trade fairs, etc	In view of steep rise in demand, an FTA in place would be a real booster. Need to maintain competitive prices and quality in presence of	1) Set up distribution infrastructure to access other regional markets Facilities like Testing/ Certification infrastructure is important to	- Preferential Trading Agreement (PTA) with MERCOSUR; operational since April 2005 - To derive benefits from FTA, an active government	Market Specific information can be provided by EEPC to exporters, EEPC can ensure enhanced participation in the specific Trade Fairs and Buyer-Seller Meets

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			Automobiles, etc.)	2) Encourage Indian firms to benefit from the recent PTA effective from April 2005	leading exporters like China, USA and MERCOSUR countries (FTAs already in place).	sustain long-term growth of exports	involvement is required	
	Brazil	- Need to incur R&D or advertising outlays. - Customs in general are non- transparent, restrictive, burdensome, and costly.	Thrust Products in Consumer Durables Category (Especially Compression Ignition and Electrical Ignition type IC Engines, Compact Engines, etc.)	1) Encourage Indian firms to benefit from the recent PTA effective from April 2005 2) Local warehousing and better Shipping service	Exports should be of higher value added items for which technology upgradation is required.	Technologically advanced goods will find a place in Brazilian market full of MERCOSUR, EU products and the major exporters from US (North America) Hence continue focus on same	- Preferential Trading Agreement (PTA) with MERCOSUR; operational since April 2005 - To derive benefits from FTA, an active government involvement is required	Market Specific information can be provided by EEPC to exporters, EEPC can ensure enhanced participation in the specific Trade Fairs and Buyer- Seller Meets
	Chile	Imports generally encounter licensing and standards issues, certification requirements, copyright and trademark violations, or service and investment barriers.	Thrust Products in Electrical Power Equipment & Parts (Especially in Transformers (both power as well as distribution) and Static Converters, etc.)	1) Creating awareness in market about Indian products vis-à-vis the market requirements and certifications 2) Buyer Seller Meets and Trade Fairs 3) NTBs could be lowered by holding Bilateral Talks.	Encouraging Indian Exporters to have Product specific tie-ups, partnerships and technical services to ensure good service and Quality with a view of Chilean Standards and certifications.	1) Ensure long terms supply arrangements 2) Strengthen Distribution arrangements 3) Provide product specific technical/ after sales service support.	Regular Bilateral level Talks to resolve trade related issues and facilitate growth in exports	Market Specific information can be provided by EEPC to exporters, EEPC can ensure enhanced participation in the specific Trade Fairs and Buyer- Seller Meets

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Africa								
	South Africa	Customs clearance delays, lack of transparency and inconsistency in customs procedures, overly bureaucratic or arbitrary processing and documentation requirements for consignments, high freight transport charges and services that are not user friendly	Capital Goods, Electrical Products, (Thrust Products in Cranes, Lifts and Winches Category; especially in parts suitable for use in pulley tackle and hoists and construction, excavating machinery, etc.)	1) More commercial interaction in the market. 2) Products specific tie-ups. 3) Demonstration of high quality of Indian products.	1) Joint Ventures for Exports promotion, 2) Competitor mapping and matching product range with competitors	1) Aim for Targeted growth achievement by close monitoring of the export performance 2) Product specific distribution and service support 3) Making South Africa as a hub for trades with other important African countries.	Preferential Trade Agreement (PTA), eventually leading to a Free Trade Agreement (FTA). This would provide a real impetus to trade and investment.	Arrangement of Buyer Seller Meets and Trade Fairs, Assistance to exporters in Export related procedures in South Africa

Source: UNCTAD PCTAS Data, EEPC 2003 Data, AFF Primary Survey, AFF Research

