

# Global Economic Scenario of Industrial and Technical Textiles

**Badri Narayanan G\***

*Affiliate Instructor, School of Environmental and Forestry Sciences, University of Washington Seattle*

**\*Corresponding author:** Badri Narayanan G, Affiliate Instructor, School of Environmental and Forestry Sciences, University of Washington Seattle

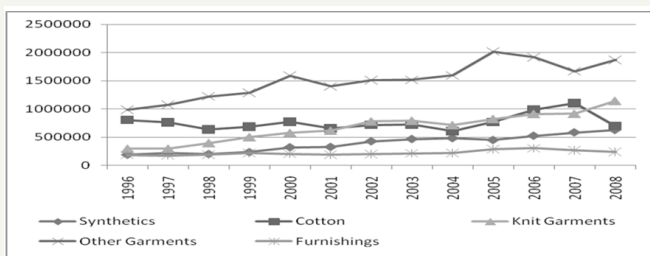
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## Overview

- A. Economic Structure of Indian Textile Industry
- B. Technical Textiles in India: Introduction
- C. Policy Overview for Technical Textiles in India
- D. Global Indutech Market: The case of USA
- E. Global Tariff/Trade Policies
- F. Unorganized Firms in Technical Textiles
- G. Economy-wide effects of Growth in TT
- H. Conclusions

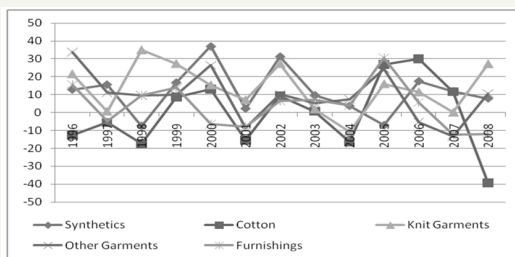
## Indian Textile Sector: An Intro

- A. Second largest employer
- B. 14% to industrial production, 4% to the GDP, and 17% to the country's export earnings
- C. Positive growth trends despite global crisis
- D. Predominantly SSI/unorganized in employment (Table 1) & (Figure 1-3).



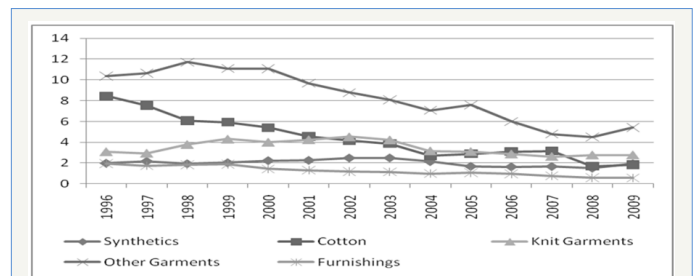
**Figure 1:** Trends in textile exports.

**Source:** DGFT



**Figure 2:** Growth trends in textile exports.

**Source:** DGFT



**Figure 3:** Recent trends in textile export shares in India's total exports.

**Export shares:** Stable/declining despite big boost from ATC. Are we missing something? Source: DGFT

**Table 1:** Author's calculations from ASI, ministry of micro, small and medium enterprises (MSME, 2002) and NSSO (2008).

Parameter	Organised Sector	Unorganized Sector	Registered SSI	Unregistered SSI
Employment (Lakhs)	19 (10%)	124 (70%)	5 (3%)	30 (17%)
Value Added (Rs. Crores)	29,780 (58%)	21,570 (42%)	NA	NA
Output (Rs. Crores)	156,390 (58%)	43,050 (16%)	9,640 (4%)	57,840 (22%)

## Technical Textiles in India

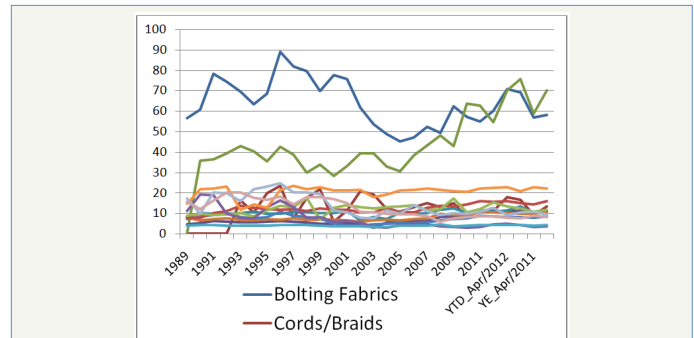
- A. National Technology mission on technical textiles (Tex-Summit 2007): XI 5-year Plan
- B. Consumption of technical textiles in India: highly import-intensive: mainly hi-tech items like medical implants
- C. Export/Growth potential segments: "commodity" types like Stuffed toys, mainly produced by SSI; also hi-tech Products: Protech, Oekotech, Sportech, Geotech and Packtech
- D. Size: Rs. 296bn in 2007-08 may rise to Rs 780bn in 2014-15; 2011-12: Rs. 570bn è on track! May grow faster than inflation!
- E. Exports: Rs 29bn, Imports: Rs 45bn in 2007-08

## Policy Overview in India

- A. Since early 2000's: NTP, ECTT

- B. Excise structure of synthetics being reduced (consistent with our elasticity estimates)
- C. Customs Concession: 5% basic duty on m/cs
- D. Focus Product Scheme: 2% Duty credit scrip
- E. TUFs: 5% interest reimbursement & 10% capital subsidy for some machines, till 2012, since 2007.
- F. Dereservation of sanitary napkins and diapers
- G. Recognition of Centers of Excellence for specific segments
- H. Other Schemes: Export Promotion Capital Goods, Duty-Free Import Authorization; though Duty Entitlement Passbook scheme was replaced by Duty Drawback in 2011: WTO compliance issues.
- I. No restricted/prohibited/STE items in tech textiles, but Standard IO norms are enforced for imports of raw materials
- J. Institutional Mechanisms: Committees
- K. Average tariff rates on imports: 10% (Figure 4 & 5).

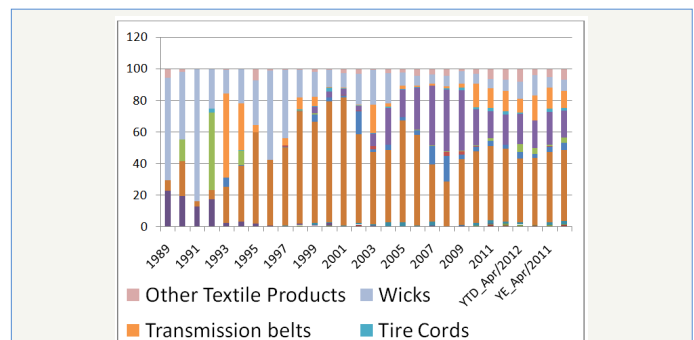
- B. China, Mexico & Vietnam: new giants, Canada leads; India has remained stagnant, but better than SAARC
- C. Impregnated fabrics, tire cords and Laminate/Rub fabrics: major import items
- D. Diminishing over time: impregnated fabrics, laminates, bolting fabrics, floor/wall coverings and hosepipes
- E. Growing over time: Tire Cords, Straining fabrics, Tracing fabrics, transmission belts; other textile products & new products (Figure 6)



**Figure 6:** Price (per KG for all except felts/coverings) trends in US technical textiles imports.

**Inferences from price trends of US technical textiles imports**

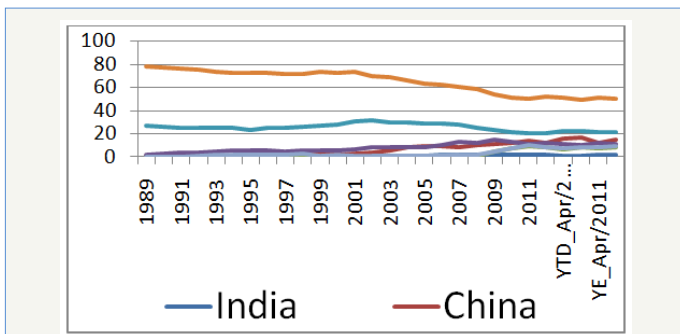
- A. Most valued: Bolting fabric, felt, transmission belts, straining cloth, cord/braid, coated fabrics, hosepipes, impregnated fabrics
- B. Least valued: tracing fabrics, tire cords (stable), laminates/rubs, wicks, others
- C. Growing value: Felts, Floor/Wall covering, straining fabrics
- D. Diminishing value: Tracing fabrics, wicks and others (Figure 7)



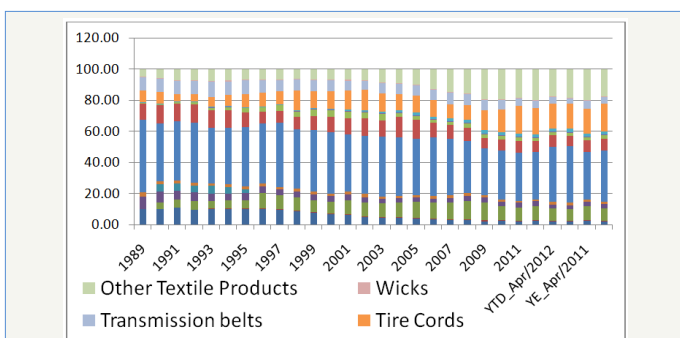
**Figure 7:** Segmental composition of India's technical textiles exports to USA.

**Inferences from segmental composition of india's technical textiles exports to USA**

- A. Major export items: Impregnated & tracing fabrics, trans belts, wicks, laminate/rub, tire cords, others.



**Figure 4:** % Share of different exporters in US technical textiles imports.



**Figure 5:** % Share of different segments in US technical textiles imports.

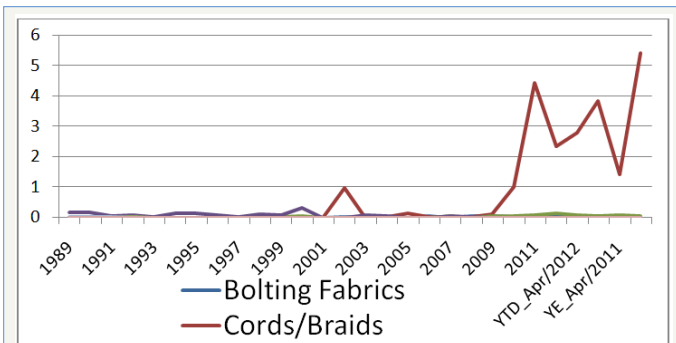
**Global Market: The Case of US Imports**

**Inferences from an overview of US technical textiles imports**

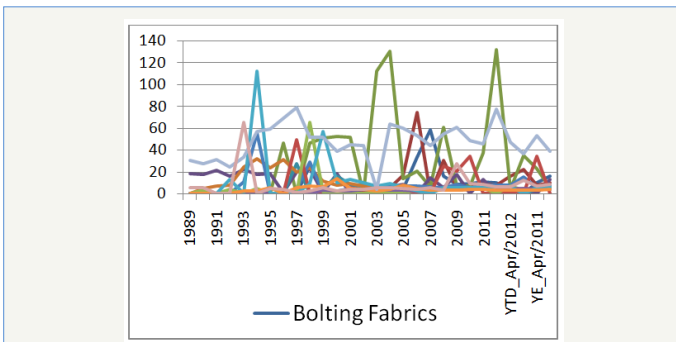
- A. Shares of developing countries are rising

B. Growing items: All of the above except wicks; hosepipes, felts, cords/braids

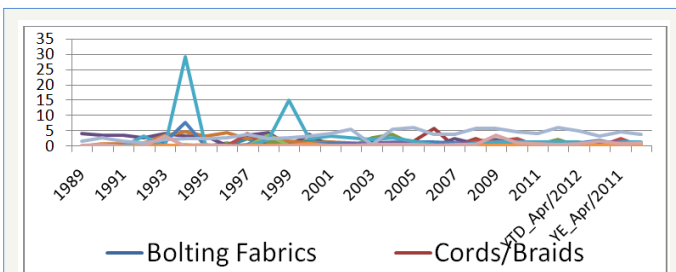
C. Diminishing items: Wicks, Coated Fabrics, Floor/Wall Coverings (Figure 8-10)



**Figure 8:** Segmental market shares of India's technical textiles exports in USA.



**Figure 9:** Price trends of India's technical textiles exports to USA.



**Figure 10:** Relative price trends of India's technical textiles exports to USA.

### Relative price trends of India's technical textiles exports to USA

- Very fluctuating prices: changing product mix?
- High Value items (>15 US\$/KG): Felts, Cords/braids, bolting fabrics, wicks, straining fabrics, floor/wall coverings, laminate/rub fabrics, others.
- Lower relative prices: Bolting fabrics, hosepipes, impregnated fabrics, coated fabrics, transmission belts → competitive or lower value items?

### Global Trade and Tariff Policies

- Most of the developing countries incentivize technical textile exports (e.g. VAT rebate: 16% in China)

B. Tariff rates: USA (0-8%), Canada (0-18%), EU (4-8%), China (8-14%), Vietnam (0-12%), Bangladesh (3-25%), Thailand (1-30%)

C. Indian tariff rates (10%) are uniform across the board → could be rationalized based on competitiveness of different segments.

### Unorganized Technical Textile Firms

- A study on the effect of trade liberalization on the efficiency of Unorganized firms
- Compares two different eras of trade openness in rural/urban India: 1994-95 and 2000-01 NSSO data
- Broadly TT firms ranked high on efficiency
- No change: Tarpaulin (high), crocheted made-ups (low, improved in rural)
- Decline: linoleum products, jute/hemp rope/cords (improved in rural), nets
- Improvement: non-tarpaulin waterproof made-ups and hats/caps
- Determinants: size, age, effective rate of protection, affiliation to agencies, location and nature of operation and ownership
- Policies needed:
  - Provision of proper credits with low interest rates to improve the technologies & infrastructure
  - Promotion of co-operative societies and agencies
  - Assistance in supply and procurement of materials
  - Incentive-based improvements in labor conditions
  - Better utilization of resources and technological improvements

### Economy-Wide Effects of Growth in TT

- Forward, backward and international linkages of textiles may generate bigger economy-wide effects
- Examine the impact of the projected (baseline survey) growth of TT on India's GDP & textile sector
- Use the popular GTAP (Global Trade Analysis Project) model

### GTAP model

- Hertel (1997): Multi-sectoral multi-regional CGE model mainly for trade policy analysis
- Elasticities: calibrated/estimated econometrically
- Demand = Supply in all markets ( $p=mc$ )
- Taxes: wedge between pros & cons prices

- e. Int'l trade: Armington CES substitution across src
- f. Inputs: intermediate & factors: Leontief
- g. Intermediate: imported/domestic: CES
- h. Factors: Labor, Capital, Land: CES
- i. Regional Household:  $Y=C+I+G+X-M$ : const shares
- j. Private HHL (C): CDE demand system: Hanoch (1975)
- k. Global savings (Fixed share of income, ROR): investment
- l. Welfare Decomposition: EV

#### GTAP data base

- a. Narayanan, Aguiar and McDougall (2012): 57-sector 129-region data: GTAP 8 Data Base
- b. Trade: based on UN COMTRADES further processed, using IMF, WTO, WB, FAO data
- c. Protection: ITC-CEPII MACMAPS Data
- d. Input-Output Tables: Various contributors; NCAER for India
- e. Energy data from IEA, OLADE, TERI
- f. OECD domestic support data
- g. Textiles is a sector here, but technical textiles is not separately available

#### Inferences from IO data in GTAP data base

Use of textiles in non-textile/apparel/service industries:

- a. Global average: 33%
- b. Vietnam: 25%; Japan: 30%; India: 19%; Bangladesh: 3%; Pakistan: 7%; Sri Lanka: 13%; Canada: 59%; USA: 40%; Germany: 23%; UK: 26%
- c. Major non-textile user industries:

- d. Automotive, machinery/ capital goods, construction, chemicals/rubber/plastics, paper/printing, leather, wood, agriculture.

#### Inferences from GTAP model simulation

- a. Expansion of technical textiles projected from 2007-08 to 2014-15 is approximately 20% of current textile output.
- b. Assuming worldwide unemployment, we simulate 20% growth in textiles in this comparative static framework.

#### Some results for India:

- a) Employment growth: 1.2% (12.7% in textiles alone)
- b) GDP growth: 1% (US\$ 12bn)
- c) Export growth: 63.5% (US\$ 8.9bn)
- d) Imports fall by: 19% (US\$ 0.7bn)
- e) Domestic consumption increases by 6.8% (US\$ 3.1bn) in textiles

#### Conclusion

- A. India has a lot of scope to grow in this sector
- B. Widespread economic effects from the growth of TT
- C. Focus on high value and growing segments as well as the ones in which we are competitive
- D. Tariff policies could be more targeted and sector-specific
- E. FDI and foreign collaboration for better access to technologies
- F. Small firms have improved efficiency due to competition and need policy support
- G. Scope for tax reduction rather than subsidies/incentives that may be contentious.



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