

**BARRIERS TO EXPORTING TO THE EU: EVIDENCE FROM TEXTILES AND  
LEATHER GOODS FIRMS IN INDIA \***

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# **Barriers to Exporting to the EU: Evidence from Textiles and Leather**

## **Goods Firms in India**

**Abstract:** Barriers to exporting continue to exist despite the lowering of import tariffs in recent years. In the current business environment these include non-tariff barriers in the foreign and home country which have the potential to impact on exporting activity of firms. In this paper, based on primary research, we analyse barriers faced by Indian textile and clothing and leather and footwear firms in exporting to the European Union (EU). First, we document the manifold types of barriers that make it difficult for Indian firms to export their products to the EU. Second, we explore the relationship between perceptions of barriers to export and firm characteristics, using interview data from a sample of textiles and leather goods exporting firms in India. We find that firms which are closer to ports report lower transport costs and less corruption than firms further away from ports. Firm size, exporting experience and whether the firm is from the textiles or leather goods industry have no significant impact on the firm's perception of export barriers. Finally, we assess policy implications of the results on Indian firms' perceptions to export barriers to shed light on issues that need addressing in the light of ongoing negotiations for a Free Trade Agreement (FTA) between the EU and India.

*Keywords:* India, EU, barriers to exports, entrepreneurship issues, textiles and clothing, leather goods and footwear.

## **1 Export Barriers: An Overview**

Despite many decades of tariff reduction under the aegis of the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO), trade barriers remain high. Although world average import tariffs have fallen from over 20 percent in the 1980s to less than 10 percent in 2009 (Ng, 2010) Anderson and van Wincoop (2004) in their magisterial survey of the literature on trade costs note that the average tariff equivalent of trade costs for industrialised countries is 170 percent. This value is higher for developing countries, and there are large variations across industries as well. The reason for the high value of measured trade costs is that they include much more than just tariffs and non-tariff barriers; they include "... all costs incurred in getting a good to a final user other than the marginal cost of producing the good itself" (Anderson and van Wincoop, 2004).

There are a large number of studies focussing on export barriers, mainly non-tariff barriers (NTBs) that manifest as behind-the-border barriers to trade. The pioneering research on export barriers identified the lack of knowledge of foreign markets as a dominant impediment to international activity commitment (Aharoni, 1966). Later research classifies barriers into internal and external barriers which impact on the activity of exporting firms. Studies show that internal barriers such as procedural, distribution and documentation problems are associated with the exporting firm's organisational resources (Bilkey, 1978; Leonidou, 1995b, 2004). Examples of such barriers include the lack of knowledge, experience, socio-economic and managerial factors (Kaleka & Katsikeas, 1995; Leonidou, 1995 a, b). External barriers, on the other hand, originate in the external environment of the exporting firm. Later studies further disaggregate the conceptual domain of export barriers

into internal-domestic, internal-foreign, external-domestic and external-foreign problems (Morgan, 1997; Kaleka and Katsikeas 1995).

Research shows that exporters' sensitivity to barriers in the foreign market is determined by managerial perceptions which are in turn influenced by contextual factors associated with firm size, resources and capability, export involvement and international experience (Barney, 1991; Suarez-Ortega, 2003; Ojala, 2007; Karelakis et al, 2008). Studies also show that exporters consider high banking charges, low capacity usage, and poor technology as the major problems that affect their business operations (Frimpong & Mmieh, 2007). In more general terms, changes in consumers' preferences, the presence of middlemen and agent representatives, import tariffs, problems finding a trustworthy distributor in the target country, exchange rate fluctuations, risk of losing money in the foreign market, and quality and safety standards are other potential export barriers to firms (Rabino, 1980; Korth, 1991; Kneller & Pisu, 2011).

In Asia, export barriers are concentrated mainly in the textile and clothing sector and studies report that most barriers are attributed to technical regulations and labelling rules (Bhattacharya, 1999; Bhattacharya & Mukhopadhaya, 2002; Chaturvedi & Nagpal, 2003). A primary survey on exporters' perceptions of barriers reports an increasing incidence of non-tariff measures on India's exports (Saqib & Taneja, 2005) Another study on India's textiles and clothing sector, informs that non-preferential rules of origin and discriminatory unilateral changes to technical rules are important barriers (Mehta 2005). The OECD survey (2005) identifies labelling requirements, technical standards, anti-dumping measures and child labour laws as main barriers to Indian exports of textiles and clothing in the EU. Other related export barriers include general absence of information, lack of transparency on procedures and regulations regarding technical specifications, inadequate information about sampling, inspection, and testing as well as changes in packaging requirements. Finally,

customs procedures and valuation rules are also identified as NTBs which have the potential to adversely impact on exporting activity (World Bank, 2009).

Studies show that the Indian industry in general has had to face competition from both domestic and foreign firms (Sardana & Sinha, 2011). The objective of this paper is to analyse the perceived export barriers faced by Textiles and Clothing and Leather Goods and Footwear industries in India. These two industries together comprise just over a quarter of India's total exports to the EU in 2010 (EC, 2011). Using data collected through interviews with managers of 30 firms, which are active in exporting to the EU in each of these two sectors, we develop and estimate an econometric model that relates export barriers reported by firms to the firms' own characteristics. Our results on Indian firms' perceptions to export barriers may shed light on issues that need addressing in light of ongoing negotiations for a Free Trade Agreement (FTA) between the EU and India. This proposed agreement aims to address behind-the-border barriers, especially the existing NTBs to trade which is the focus of this paper.

The paper is structured as follows. Section 2 discusses the key characteristics of Leather and Footwear and Textiles and Clothing industries, main sectors analysed in this study, and highlights barriers faced by Indian exporting firms in these sectors in the EU. Section 3 details the empirical analysis of the relationship between firm characteristics and perceptions of barriers to exporting. We find that firms which are closer to ports perceive transport costs and corruption are less important barriers than firms which are further away. On the other hand, firm size, exporting experience and whether the firm is in the textiles or leather industry have no significant impact on the firm's perception of the level of export barriers. The final section concludes and presents policy implications of the results on Indian firms' perceptions to export barriers that shed light on issues that need addressing in light of ongoing negotiations for a FTA between the EU and India.



## **2 Industry Overview and Export Barriers faced by Indian Firms**

### *2.1 Industry Overview: Textiles and Clothing*

The Textiles and Clothing industry in India primarily produces men's clothing, knitted and hosiery products (Ministry of Textiles, 2010). During 2008-09, the value of India's Textiles and Clothing exports was US\$ 20 billion or nearly 12 percent of total national exports (DGCI&S, 2010). Though the industry provides employment to 21 percent of the labour force and contributes nearly 14 percent to industrial production, its share in total gross domestic product is small, at 3 percent (Economic Survey, 2010). The Textiles and Clothing supply chain comprises several interrelated production stages which include ginning, spinning (yarn), weaving and knitting (fabrics), dyeing and processing, and garments manufacturing. One end of the chain is dominated by large firms and high-street retailers with multiple internationally located outlets. Further up the chain there are many small and medium sized firms.

Firms in the Indian Textiles and Clothing industry are grouped into the organised and unorganised sectors. Organised firms are medium to large-sized and often vertically integrated along the supply chain. These are registered under the Factories Act (1948) and further classified as those using electricity and employing 10 or more workers, or those firms that do not use electricity but employ 20 or more workers. Firms in the unorganised sector do not meet these criteria and comprise small firms including power-loom, handloom, hosiery, knitting and readymade, *khadi* (coarse cotton cloth) and carpet manufacturing units (Ministry of Textiles, 2010). The Indian government provides special incentives under the national industrial policy to small firms through concessional credit, modernisation and technology

upgrade support, export credits, and low tax rates (Economic Survey, 2010). The number of small firms has, therefore, increased in the unorganised sector along the supply chain.

The increase in the number of small firms is also attributed to policy guidelines of the 1990s that required these firms to produce only for the domestic market but larger firms had to export at least 50 percent of their output. This policy resulted in an inefficient industry with a fragmented market structure (Ministry of Textiles, 2000). The Indian government has recently withdrawn special preferences for the small scale sector as a result of which medium sized firms are becoming significant contributors to total apparel exports. These cost-effective medium sized firms are situated in the Textiles and Clothing clusters which enhances competitiveness as firms benefit from a common pool of resources and infrastructure. Examples of successful export oriented hubs include Tirupur, Ludhiana and Panipat, which account for 80, 95 and 75 percent of the production of total hosiery, woollen knitwear and blankets, respectively.

## *2.2 Industry Overview: Leather and Footwear*

India is the third largest leather producer (after China and Italy) and the fifth biggest exporter of leather goods and accessories in the world. The leather industry is classified on the basis of activity into: (a) leather processing firms, which include tanning and finishing units, and (b) firms producing leather products such as footwear and its components, leather garments and goods. The Indian leather industry produces a diverse range of products that range from raw hides, footwear & footwear components, leather garments, leather goods to saddles & harness products, and accessories. Leather footwear firms are located mainly in Chennai, Hyderabad, Agra and Kanpur, leather garments in Delhi, Bangalore and Chennai, while leather accessories are produced in Kolkata, Chennai and Kanpur (CLE, 2010).

As with the Textiles and Clothing industry, the Leather and Footwear industry is divided into organised and unorganised sectors. Production is mainly concentrated in the unorganised sector, which includes small tanning units, and contributes nearly 90 percent of total leather exports (CLE, 2010). Firms in the unorganised sector are not registered under the Indian Labour Act so these units have no legal obligation to provide social security benefits for their employees. In most cases, the unorganised firms employ traditional production technologies that are inadequate to comply with environmental regulations on effluents and emission levels. Environmental pollution levels in tanneries and small manufacturing firms are, therefore, high. The unorganised sector is heavily reliant on imported machines because most small firms have limited financial resources for investments in R&D and innovation. Not only does this stifle domestic innovation but it increases the vulnerability of firms to changes in foreign markets. Among other shortcomings, the leather supply chain is geographically dispersed which does not enable the firms to benefit from agglomeration economies. The existing institutional and firm-level constraints together with existing physical and technical infrastructural deficiencies and competition from Chinese synthetics and non-leather products have an adverse impact on export competitiveness.

### *2.3 External Barriers Encountered by Indian firms in Exporting to the EU market*

There is a diverse set of barriers encountered by Indian Textile and Clothing and Leather and Footwear firms exporting to the EU. This study classifies the most frequently reported export barriers as internal and external barriers. Internal barriers are intrinsic to the firm and home business environment. These are characterised by problems faced in export activities and are incurred either through the exporting firm's organisational resources or its approach to export marketing that affect the ability of firms to export. Examples of internal barriers within India include transportation and distribution difficulties, inadequate market information,

corruption, lack of awareness about changing EU legislation and new buyers, as well as difficulties experienced in establishing contact with new buyers in foreign markets. The external barriers that Indian firms face in their exporting activity emanates from the EU legislative and non-legislative market access requirements and are a result of the foreign regulations, standards and requirements. Examples of barriers that derive from external legislative requirements are importers' insistence on compliance with higher than minimum specified chemical limits, testing and certification requirements, packing and related waste in excess of the EU norms. The non-legislative market access component originates from the implementation of voluntary labels and standards by the EU Member States.

Within the context of EU-India trade, external barriers that industries encounter originate from regulatory framework in the EU that are minimum quality standards to guarantee the health and safety of the consumer or protection of the environment. These regulations and standards are legal documents and are mandatory in all cases. Over-implementation by importers manifests as NTBs to the exporting activity of firms which translates into: (1) administrative burden of compliance (2) additional financial costs. For instance, in the Leather and Footwear industry, buyers require exporters to comply with chemicals limits in excess of the specified requirements. Examples include demand for over-compliance with the norm on specified limits for chemicals used in leather processing and finishing such as azodyes, chrome IV, cadmium, polychlorinated biphenyls, terphenyls, and Benzedrine.

Another example from the Leather and Footwear industry is the EU's Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) legislation which aims to phase out harmful chemicals over 10 years by employing the life cycle process approach to production. Other related costs to implement REACH are changes necessitated in production processes given the extant EU rules require exporting firms to identify all inputs used in

production of the final product. Other associated compliance costs for REACH include independent accreditation and verification of exporters' compliance at a fee every time this list is updated. In addition, the EU importers overzealously implement the permissible limits of chemicals such that presence of chromium in tanneries effluent waste (the allowed limit is < 5mg/litre after treatment) even by a small margin has resulted in closure of many tanning units in India. In the Textiles and Clothing sector, EU environmental regulations apply but importers demand less than the minimum EU permissible limits of amine dyes (usage allowed < 30 parts per million), cadmium (used to colour finished garments), mercury compounds, and volatile organic carbons (VOCs) in printing pastes. Such technical requirements on the minimum quality standards to guarantee the health and safety of the consumer or the protection of the environment raise prices of imports in a way that is equivalent to a tariff.

Further costs arise given producers have to prove conformity with any given standard or technical regulation. In principle, certification of goods conformity can be carried out either by the exporting firm, government agencies, or outsourced to other firms. Since exporting firms in India and government agencies lack qualified technicians/laboratory assistants and have shortage of testing equipment, in most cases the results of tests and accreditation are not recognised by EU buyers. Without exception, the EU-based importers demand that exports of Textiles and Clothing (e.g. functional garments, uniforms, upholstery materials, home furnishings and made ups, carpets and rugs, and industrial fabrics) and Leather and Footwear from India are tested and certified by EU nominated foreign testing agencies, such as SGS Testing, Specialised Technology Resources Inc or even laboratories in the EU (Khorana, et al, 2010). In addition to these, there are overheads such as consultancy fees for certification, translation of technical documents for the certifying agencies in languages other than English, despatch charges of samples and technical documents. Costs

are also involved for packaging of final product depending on destination country with regards to waste reduction at source, elimination of harmful materials in packaging waste, maximising the recovery of packaging waste for re-use, recycling, composting or energy generation, and minimising final disposal. An example is the EU Directive on packaging that imposes a specific chemicals concentration limit (100ppm by weight of lead, cadmium, mercury and hexavalent chromium) for footwear and clothing packaging, though importers inevitably ask Indian firms to comply with much lower limits (Chaturvedi & Nagpal, 2003).

Another barrier emanates from standards, both national and voluntary, that vary widely between different EU Member States. In almost all cases, buyers require that product labels be in line with both the EU legislation and Member States' national domestic standards. As a result, firms have to meet different standards and are unable to benefit from economies of scale. Also it is mandatory in most EU Member States to have separate labels on inner and outer clothing in the national language, in addition to English. Indian apparel manufacturers are also required to import labels from designated label manufacturers in Hong Kong China. Finally, buyers require conformity with private labelling schemes such as Öko-Tex and Britta Steilmann (Germany) and Bra-Miljöval (Sweden) and also require to demonstrate conformity with *Markenzeichen Schastoffgeprüfth Textilien* (MST) and *Markenzeichen Unweltschonende Textilien* (MUT), which specify norms for production processes and standards on the degree of air, water and soil pollution. Indian firms also have to apply for the eco-award to different EU Member States so additional voluntary standard compliance inflates total production cost.

#### 2.4 *Internal barriers encountered by Indian firms in exporting to the EU market*

Internal or domestic barriers stem from inadequate physical infrastructure, corruption and high transport costs which impacts adversely on Indian firms' export competitiveness.

Changing fashions in garments necessitate shorter production schedules and in light of the existing physical infrastructure constraints in India it is a challenge for exporters to ensure timely deliveries of initial and repeat orders. In particular, Indian exporters' competitiveness is disadvantaged by an ineffective domestic logistics system. The inefficiency of the Indian inland transportation system is attributed to outdated transport lorries, poor road conditions, unavailability of all-weather road connectivity, frequent road strikes, and rising fuel costs. Exporters in north India (Agra, Kanpur, and Delhi) and east (Kolkata) are at a cost disadvantage compared to firms located in the West because firstly, most exporters use Jawaharlal Nehru Port Trust in Mumbai (JNPT) which is a modern state-of-art port located in the western part of India; and, secondly, Indian Railways and a few domestic air cargo carriers, which are the main inland transport agencies, have limited capacity to handle large export volumes. The World Bank (2009) also identifies inland transport and port congestion as major impediments to Indian exports. Besides, existing ports lack mechanised handling and loading equipment which adds to loading time, increases warehousing costs and adversely affects delivery schedules (Brooks and Stone, 2010). This leads to congestion at JNPT. In addition to high inland transportation costs, traders face steep port charges and terminal handling fees. Unavailability of containers is another common constraint faced by exporters. Finally, cargo is often delayed because of numerous official and unofficial checkpoints on the principal trade routes, in particular between state borders and district boundaries (Planning Commission of India, 2010). In this manner, high transport costs and physical infrastructural deficiencies impact on competitiveness directly and raise per unit export costs.

Corruption and bureaucracy is another important barrier (Brooks and Stone, 2010). Bribery and corruption are highlighted as a growing menace with the potential to adversely impact on India's economic growth (KPMG, 2011). High domestic corruption, attributed to

excessive governmental regulations and bureaucratic hurdles, is a commonly constraint reported by Indian exporters (Khorana et al, 2010). Extant rules require Indian exporters to undertake excessive administrative formalities in different offices. Examples are registering to obtain the export code in Export Council, obtain unique business identification number called director identification number (DIN) from the Ministry of Corporate Affairs, obtain the Certificate of Incorporation from the Registrar of Companies, Register for Value-Added Tax (VAT) at the Commercial Tax Office, obtain Tax Account Number (TAN) and sales tax registration certificate at the Tax office. To set up a production unit, an exporter has to submit as many as 35 applications for approvals, clearances and licences as well as has to make 'facilitation payments'. Corruption is compounded by the existing governmental policy that allows tax breaks and financial support to small exporting firms.

South Asia is characterised by inefficient customs procedures which often increases clearance time (Hertel and Mirza, 2009). Barriers at ports include excessive paperwork requirements, lack of standardised documents, theft and pilferage. Often there is no transparency in inspection of export consignments and lack of clarity on documentation required in small ports which increases waiting time of exports. Commonly reported procedural barriers in India are excessive customs documentation and administrative formalities. Customs clearance delay is a significant impediment to the Footwear exporting firms in particular. The World Bank (2009) finds most time is spent complying with burdensome paperwork and estimates that it takes 8 separate documents to export, and 9 to import to India. In most cases, the main problem is to obtain the origin certificate and customs certification on inward processing, temporary importation and outward processing. Often exporting firms do not have requisite documents to prove conformity with the rules of origin and domestic content and as a result are unable to export at preferential tariffs to the EU. Finally, there are related problems of customs valuation at the destination port faced by

Indian exporters which manifests as the final barrier to small firms' exporting activity (Khorana, et al, 2010).

### **3 Export Barriers and Firm Characteristics**

#### *3.1. Data and Methods*

In this section we analyse the relationship between firms' characteristics and their perception of the degree of barriers to exporting. We conducted interviews with managers from a sample of 30 textiles and clothing firms and 30 leather and footwear firms. The firms selected for the survey are chosen to provide coverage of the different types of exporting firms. The sample includes firms that are presently exporting to the EU and to other markets. The sample of firms selected for interview in the Textiles and Clothing sector was on the basis of information from Apparel Exports Promotion Council (AEPC) and the Confederation of Textile Industry in New Delhi. The Textiles and Clothing exporters interviewed were located in export-oriented clusters all over the country. For example, in the Southern cluster the main production clusters interviewed were Tirupur (knitted cotton garments such as T-shirts, ladies and children wear), Coimbatore (yarn) Erode (yarn and fabrics), and Bangalore (basic and fashion garments). In the West, the cluster in Mumbai (for made-ups such as bed sheets, towels; and fashion garments) was selected; while Okhla in Delhi, Noida in Uttar Pradesh and Gurgaon in Haryana (for fashion garments) were interviewed since these are the main clusters in the North. The sample of firms in the Leather and Footwear sector was based on registered exporters' list with the Council for Leather Exports (CLE), Chennai. Since most leather and footwear firms are located in Tamil Nadu, West Bengal and Uttar Pradesh, which are the main production areas for leather footwear and accessories production, exporters interviewed were located in Chennai, Agra and Kanpur (footwear manufacturing), Delhi and

Kolkata (leather accessories). Table 1 shows the geographic location of the firms in the sample.

< Table 1 about here >

In the econometric analysis of the relationship between firm characteristics and perception of trade barriers, we estimate the following equation:

$$\text{Trade barriers} = f(\text{Turnover}, \text{Export experience}, \text{Distance from ports}, \text{Industry})$$

Where trade barriers are measured using one of the following: (1) Regulations and standards; (2) Testing and certification; (3) Labelling and packaging; (4) Environmental requirements; (5) Transport costs; (6) Corruption and theft; (8) Customs and documentation. The first four barriers may be categorised as external barriers; that is, barriers which make it difficult for an Indian firm to export to the EU market. Within the external environment, barriers are attributed to EU regulations that aim at safety, sanitation, environment, and consumer information. The last three trade barriers may be categorised as internal barriers; that is, domestic barriers that make general economic activity difficult for exporting firms in India. Each trade barrier is rated by an exporting firm on a scale from 1 to 5, where a higher value indicates a more significant barrier. A value of 1 on the scale indicates that the respondent did not face this barrier in trading with the EU. This equation is estimated using OLS methods, with the standard errors corrected for heteroskedasticity using the White correction.

As explanatory variables, we use four variables. First, we use the annual turnover of the firm, measured in the natural log of rupees, as our indicator of the size of the firm. This follows from the assumption popular in the recent theoretical literature (e.g. Melitz, 2003) in

which there are both fixed and variable costs of exporting. The presence of fixed costs of exporting would suggest that large firms would perceive a relatively lower barrier to exporting than small firms. The second explanatory variable we use is the natural log of the number of years of export experience of the firm. If exporting costs do not change very much over time, then the more export experience a firm has, the lower should be its perceived export barrier, as the firm becomes familiar with the various costs associated with exporting to the EU. Third, we use the road distance of the city in which the firm is located to the closest major port, defined as JNPT close to Mumbai, Chennai, Kolkata, Tuticorin, Pondicherry and Mangalore. This captures the additional costs of exporting if a firm is not located close to the port, not only in terms of freight costs, but also port related and administrative costs for documentation that needs to be submitted to the port authorities. Hence we would expect firms that are further from ports to report higher barriers to exports. Finally, we include an industry dummy to determine whether firms in one sector perceive there to be tougher barriers to export than firms in the other sector.

Table 2 provides the summary statistics of the variables used; Panel A is for the Textiles and Clothing industry, while Panel B is for the Leather and Footwear industry. What is clear from this table is that firms in both industries have similar perceptions of barriers to trade. Firms in the Textiles and Clothing industry are slightly larger on average than those in Leather and Footwear, and are on average slightly closer to a major port. The firms in the sample have on average 20 years of exporting experience, although this varies from 5 to 78 years.

< *Table 2 about here* >

### 3.2 *Results*

Table 3 reports the results of our regression analysis. Firms that are further from a major port report higher barriers especially in terms of regulations, transport costs and corruption. This is what we may expect, as these firms have to incur additional inland transportation costs on Indian roads and rail system, including many interstate tax checkpoints, and poor road conditions and limited rail capacity as a result of ageing rail-track infrastructure. This finding confirms an earlier report by the World Bank (2009) that highlights the poor condition of physical infrastructure and stresses the need for investments in road and rail infrastructure. An explanation to the perception of higher barriers faced by firms located further from ports is that these might be less familiar with the operations of customs and other government agencies involved in exporting than firms located closer to port cities (which may then be interpreted as corruption). However, firm size and export experience have little influence on the level of export barriers reported. This suggests that our priors about the role of firm size and export experience in reducing the perceived costs of exporting are not verified in the empirical analysis. It is possible that this is caused by the rapidly changing nature of the trading relationships between India and her trading partners, which may impact on both, large and small as well as experienced and inexperienced firms in the same way, thus giving no advantage to any group of firms. A more prosaic possible explanation for the non-significance of firm size and export experience is that larger and more experienced firms may be reluctant to report that they face lower barriers. There is no significant impact of the industrial sector on perceptions of barriers to exporting, confirming the initial finding in Table 2 that firms in both industries experience similar levels of barriers.

*< Table 3 about here >*

In unreported results we added other explanatory variables to test the robustness of the results of Table 3 and to yield additional insights. These variables were a dummy for whether or not the firm is located in Delhi, to capture any potential advantages in terms of export facilitation for a firm of locating in the capital, and the natural log of the population of the city the firm is located in, to capture the additional services (both government and private) that may be provided in a larger city that may facilitate exporting activities. However, neither of these variables turned out to be significantly related to any of the barriers to export. From this we may conclude that, as far as exporting is concerned, there are no statistically significant benefits from being located in Delhi, or in a larger city as opposed to a smaller city.

#### **4 Conclusions**

In this paper we have developed and estimated an econometric model of the barriers to exporting as perceived by a sample of Indian firms in the textile and clothing and leather and footwear industries. Our main finding is that firms which are closer to ports report less transport costs and corruption than firms further away from ports. Importantly, firm size, exporting experience, and whether the firm is in the textiles or leather industry, has no significant impact on the firm's perception of export barriers.

Our results have relevance for the ongoing EU-India negotiations for a FTA. In section 2 we describe the NTBs faced by both Textiles and Leather goods firms in exporting to the EU, which highlights an important area for negotiation between the two parties to the FTA. NTBs are often an understated aspect but these are a significant problem as they increase compliance costs and the importance of addressing NTBs has been specifically

highlighted in the proposed FTA. Technical regulations compliance is a fixed cost for Indian exporters, which when combined with shortage of capital, transportation and other costs, has a significant impact on the financial resources and profitability of small exporting firms in particular. Within the context of ongoing EU-India FTA negotiations, existing external and internal market barriers, in particular NTBs can be addressed through a collaborative review of regulatory divergence and similarities between the EU and India as partner countries. Collaboration on regulatory mechanisms will enable clear understanding of the regulatory development and compliance requirements and foster transparency. Such consultations will also support the Indian government in identifying export promotion programmes that are relevant from the perspective of Indian exporters and focus on addressing the existing internal barriers. Complementing regulations with information dissemination on national standards, certification and accreditation procedures through national and regional contact centres is equally vital. Besides, technical assistance commitments under the FTA framework are important for capacity building of Indian exporters so that firms can respond to the challenges of EU regulations, standards and the environment agenda. Addressing regulatory divergence should be included in technical assistance as this will enable building capacity of exporters. Also, a consultation mechanism between the EU and India is also proposed to allow opportunity to stakeholders to discuss proposals before new standards are implemented. In this manner, a FTA can result in an enabling external environment, which is mainly attributed to regulatory and standards divergence, as this will provide signatories with an opportunity to improve, harmonise, and make the regulatory environment more predictable. This must be complemented by domestic policies to address internal barriers.

Our econometric finding that the distance from ports raises perceived barriers to trade suggests that the mere formation of the EU-India FTA will not be a panacea to the difficulties faced by Indian firms in exporting to the EU. In particular, it suggests that improvements in

domestic infrastructure will be a key component of expanding Indian trade in these sectors. Better quality infrastructure will eventually reduce overall transit time and allow exporters to manage the supply chain effectively to ensure timely delivery of export orders. An important way forward to address the infrastructure constraint is to augment the existing physical infrastructure by creating sustainable infrastructural linkages that will confer the exporting firms with a distinct competitive cost and time advantage. Suggestions for infrastructure enhancement include promoting private-public partnerships, privatising ports for efficient delivery of port services including pilotage, towing, loading, handling and other ancillary services. An associated recommendation is setting up additional export promotion clusters as this will allow exporters to benefit from agglomeration economies in the common pool of resources particularly physical infrastructure such as transport, technology parks, training and design institutes and effluent management facilities. Finally, customs procedures must be simplified and computerised as this will enhance transparency in the system and also address high levels of corruption.

Finally, our finding that larger and more experienced exporters do not perceive lower trade barriers is indicative of the rapid policy and economic changes occurring in the Indian economy. In such an environment, past experiences may be less relevant, and the possibly greater flexibility of smaller firms more important, in securing new markets for their products.

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Table 1: The location of the firms in the sample.

Location	Textiles	Leather	Total
Agra	0	2	2
Bangalore	3	0	3
Chennai	1	6	7
Coimbatore	2	0	2
Delhi	5	7	12
Erode	4	0	4
Gurgaon	4	4	8
Kanpur	0	5	5
Kolkata	0	4	4
Mumbai	5	0	5
Noida	0	2	2
Tirupur	6	0	6
Total	30	30	60

Table 2: Descriptive statistics of the variables used in the regression analysis.

<b>Panel A: Textiles and clothing</b>					
Variable	Obs	Mean	Std. Dev.	Min	Max
Customs and documentation	30	2.97	1.07	1	5
Regulations and standards	30	2.53	0.82	1	4
Testing and certification	30	2.30	0.88	1	4
Labelling and packaging	30	2.13	1.14	1	5
Environmental requirements	30	1.80	0.81	1	3
Transport costs	30	2.03	0.76	1	4
Corruption and theft	30	2.47	0.78	1	4
Turnover (million rupees)	30	669.0	1,370	25	7,200
Export experience	30	20.53	13.01	5	78
Distance to port (km)	30	703	534	9	1,421

  

<b>Panel B: Leather and footwear</b>					
Variable	Obs	Mean	Std. Dev.	Min	Max
Customs and documentation	30	2.67	1.24	1	5
Regulations and standards	30	2.33	1.09	1	5
Testing and certification	30	2.13	1.07	1	5
Labelling and packaging	30	1.90	1.03	1	4
Environmental requirements	30	2.07	1.26	1	5
Transport costs	30	1.97	1.27	1	5
Corruption and theft	30	2.30	1.47	1	5
Turnover (million rupees)	30	527.0	573	50	2,100
Export experience	30	19.83	12.77	5	59
Distance to port (km)	30	859	631	7	1,419

Notes: Customs and documentation, Regulations and standards, Testing and certification, Labelling and packaging, Environmental requirements, Transport costs, and Corruption and theft are measured on a scale from 1 to 5, with larger numbers indicating greater barriers to trade.

Table 3: Regression results for the relationship between firm characteristics and barriers to trade.

Dependent variable	(1) Customs and documentation	(2) Regulations and standards	(3) Testing and certification	(4) Labelling and packaging	(5) Environmental requirements	(6) Transport costs	(7) Corruption and theft
Ln(Turnover)	-0.178 (1.74)*	0.030 (0.23)	0.091 (0.84)	0.070 (0.55)	0.005 (0.05)	0.029 (0.30)	0.007 (0.06)
Ln(Export experience)	0.134 (0.45)	0.346 (1.45)	0.162 (0.60)	-0.139 (0.41)	-0.025 (0.08)	-0.417 (1.60)	0.093 (0.31)
Distance to port	0.248 (0.99)	0.402 (2.07)**	0.237 (1.15)	0.223 (0.86)	0.000 (0.00)	0.666 (3.84)***	0.983 (4.79)***
Textiles	0.240 (0.80)	0.252 (0.96)	0.237 (0.91)	0.314 (1.00)	-0.262 (0.95)	0.216 (0.90)	0.316 (1.21)
Constant	5.314 (2.69)***	0.171 (0.07)	-0.550 (0.27)	0.405 (0.16)	2.295 (1.06)	1.790 (0.94)	0.750 (0.36)
R <sup>2</sup>	0.07	0.12	0.06	0.03	0.02	0.18	0.25
N	60	60	60	60	60	60	60

Notes: \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%. Estimation method is OLS with standard errors robust to heteroskedasticity; t-statistics are reported in parentheses. Textiles is a dummy variable which takes a value equal to 1 if the firm is in the textiles and clothing industry, 0 otherwise.

