

THE IMPACT OF TECHNICAL BARRIER TO TRADE ON PAKISTAN TEXTILE INDUSTRY

S. M. H. Shah, A. Sajid and S. M. Ali*

Department of Engineering Management, (CASE), UET, Taxila. Pakistan. *Department of Management Sciences, COMSATS Institution of Information Technology, Wah, Pakistan.
Corresponding Author e-Mail:mutahir5@gmail.com

ABSTRACT: During the last three decades, trade barriers have been drastically reduced under obligations of WTO. Due to freedom in trade, competition has increased, forcing industries to improve their productivity to compete in this free market. However there are still some trade barriers which are used to block market access. Technical Barrier to Trade (TBT) is one of such barriers. In this study the impact of TBT on export performance of Pakistan textile industry has been empirically evaluated. A model was framed which represented TBT and export performance as variables. Primary data was collected from top textile firms of Pakistan. Multiple regression analysis was applied on the primary data. Results indicated that TBT has positively affected the performance of Pakistan textile industry.

Keywords: WTO, TBT, export performance, textile industry, Pakistan.

INTRODUCTION

Trade liberalization is considered as catalyst which stimulates economic activity in a progressive economy. It opens up market economy to flourish and prosper. In poor countries, trade liberalization improves the economy and helps reduce poverty (Dollar and Kraay, 2001, World Bank Report, 1987). Contrary to this, there are studies which indicate that there is not enough evidence to support relationship between economic growth and trade liberalization (Grossman and Helpman, 1991, Rodriguez, and Rodrik, 2000).

The conviction that an outward looking trade policy is better than an inward-looking or shelter view, has been enthusiastically discussed in the economic enhancement literature (Krueger, 1978, Dollar, 1992, Sachs and Warner, 1995). Whereas the belief that exports are good for economic development is well established, but the ways to export production have been challenged in the trade and industry literature. The experience of East Asian countries has revealed that the route to export production is certainly via import substitution (Amsden, 1989, Wade, 1990), Ocampo and Taylor, 1998).

During 1990-2005, trade liberalization was an obligation for Pakistan. This opening of trade was largely enforced by the IMF and World Bank during structural adjustment program (Kardar, 1997). Pakistan is a developing economy and her major source of revenue is from services and agriculture. The contribution of production, construction, retail trade services and wholesale, in Pakistan's GDP, has gone down gradually (Weisbrot and Baker, 2002).

Textile forms 60% of Pakistan's total exports. It has faced market access challenges due to discriminating trade barriers by developed countries. For developing

countries, main hindrance to market access is non tariff measures (NTM) which include TBT. Open trade is supposed to help greater market access by reducing negative market indicators and boosting productivity in the local market and fair distribution of resources. Pakistan has gradually shifted its exports from raw to finished products (Pakistan Economic Survey, 2001). However in case of textile, Pakistan can not appreciably shift its products from primary goods to finished commodities due to low market access because of presence of NTM.

In this study, author has analyzed the impact of TBT, which is part of NTM, on productivity of Pakistan textile industry.

The research question developed on the basis of arguments in previous section is as follows:
How much and to what extent have the trade barriers as TBT, influenced export performance and the productivity of textile industry of Pakistan, during the period 1990 to 2005?

The purpose of the study was to evaluate empirically the impact of TBT on the export performance and productivity of textile Industry of Pakistan.

This study is beneficial for the policy makers of the Government of Pakistan, textile firms operating in Pakistan, research scholars, research organizations, universities as well as foreign research organizations who want to enhance their understanding regarding effects of trade barriers on the textile industry of Pakistan.

TBT refers to different measures which countries use to control the markets, defend their consumers and protect natural resources. However, it may additionally discriminate against imports in favor of domestic products (Geoffrey, 1997). There is persistent fear among small developing countries about the rate at which new and possibly more complex standards and

regulations are being introduced into the global markets (Broberg, 2009).

Market-driven voluntary standards usually do not threaten market access, but failure to observe these standards or technical rules in different national and international laws will result in refusal of merchandise at points of entry by the customs. A certain commodity can sustain positive and negative impacts by standards and regulations through labeling and packaging laws, the food safety rules and the inspection and certification rules. Those countries which are allowed a duty-free access to the European market, cannot guarantee their permanent presence in this market, as they can be blocked by some technical requirements. TBTs result in enhanced cost for exporter in market access. Even inside the European Union, around 10% of overall expenditure falls on merchandise from different European Union countries.

Local regulations and standards can present multiple barriers to trade depending upon their aim and also the structural amendments and behavioral responses.

MATERIALS AND METHODS

In this study, author formulated a mathematical research model to represent association of TBT with the export performance of the textile industry of Pakistan. Primary data was collected by means of a structured questionnaire. Author developed a questionnaire that comprised of questions which were adopted from the research studies of (Pricewaterhouse, 2001, MAIA and IFM, 2004). Questionnaire included two parts. First part asked respondents questions about demographics of the firm and second part asked respondents questions about the variables of the study.

We collected primary data from selected textile firms based on their export revenue. The top 50 export oriented textile firms, operating in Pakistan, were selected from Federal Board of Revenue (FBR) data and sent questionnaire to all of these firms. The mathematical model of the study was tested by the application of multiple regression analyses.

The research model of the study comprised of two variables (one Independent Variable - IV and one Dependent Variable - DV) which are represented in the model presented below as Figure-1:

Factor affecting Market Access (IV)

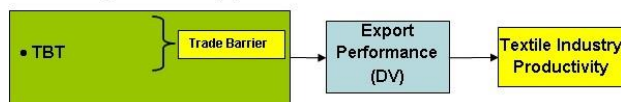


Figure 1: Research Model of the Study

Mathematical Model of the Study: The mathematical model of the study is as follows:

$$EP_{\text{TexIn}, t} = \alpha_0 + \beta_1 TBT_{\text{TexIn}, t} + \varepsilon_{\text{TexIn}, t}$$

Where, symbolic expressions in above mathematical model have the following meanings:

$EP_{\text{TexIn}, t}$ = Export Performance (EP) of the textile industry in the time 't'

$TBT_{\text{TexIn}, t}$ = Technical Barriers to Trade (TBT) related to the textile industry in the time 't'

α_0 = Model Constant

β_1 = It is the coefficient of the independent variable included in the model

$\varepsilon_{\text{TexIn}, t}$ = Model error term

This mathematical model was formulated to evaluate the impact of independent variables on the dependent variable in the textile industry of Pakistan. This model has been tested by applying multiple regression analyses on the collected data by using statistical package for the social sciences (SPSS).

RESULTS AND DISCUSSION

The reliability of the instrument was checked by applying Cronbach's alpha which resulted in a score of .856 and validity of the instrument was assessed by applying factor analyses which showed values of all the items of the instrument greater than the 0.50 cutoff value.

In this study Confirmatory Factor Analysis has been employed to access the construct validity of the research instrument of (Hafiz and Shaari 2013, Hair et. al. 2010) that validity is a measure that correctly defines the concept of the study. Moreover, (Hair et. al. 1995) reported that the factor loadings must be greater than 0.5 cutoff value. The confirmatory factor analysis (CFA) of the constructs of the study has been presented in table 1 below:

Table 2 shows that TBT was taken as single independent variable and EP as single dependent variable. Beta coefficient ($\beta=.198$) for TBT was positive and significant as p-value ($0.024 < 0.05$). Value of standard error (error=.077) for TBT was lower which confirmed increase level of predictability of TBT used as independent variables in the study. The t-value ($t=2.561$) for TBT was significantly higher, which confirmed higher level of association between TBT and EP of textile firms taken as sample. Lower p-value ($0.024 < 0.05$) resulted in the acceptance of the hypothesis of the study and established that the TBT during period 1990 to 2005 had positively affected the EP of Pakistan's textile industry. TBT as independent variable has explained 33.5% variance in EP taken as dependent variable in the study. Moreover, F statistics ($F=6.557$) was significant for p-value ($0.024 < 0.05$) which showed higher strength of the research model. Hence, the regression results showed that there was a significant level of relationship between TBT with EP variable. Here, in the case of Pakistan, TBT had positively impacted the export performance of Pakistan's textile industry.

Table – 1. Confirmatory Factor Analysis

Communalities		
	Initial	Extraction
Please indicate your company size:	1.000	.869
What percentage of market share do you have?	1.000	.870
What is the nature of your product?	1.000	.920
What is your annual turnover?	1.000	.864
What is the percentage of your overall global turn over?	1.000	.692
How do you distribute - Sole agent, distributors, selling direct?	1.000	.957
Are you aware of the barriers in relation to inspection and standards?	1.000	.788
Are your goods subjected to inspection over and above those that locally produced goods are subjected to?	1.000	.846
Are you required to provide the authorities a full description and / or ingredients listing for your products?	1.000	.816
Are there restrictive technical specifications applicable only to imported goods, not locally manufactured goods?	1.000	.697
Have you experienced technical standards which are different from those applicable in the host country?	1.000	.832
Are such measures transparent and consistently applied?	1.000	.921
The new measures introduced frequently and/or unexpectedly?	1.000	.751
Due to the effect of SPS and TBT, how much volume of your export was during 1990-2005.	1.000	.892
Have you experienced restrictive labeling requirements applicable only to imported goods, not locally manufactured goods?	1.000	.777
Do such measures also apply to their local product?	1.000	.921
Export Performance (Dependent Variable)	1.000	.989
Which industry sector would you classify your business under?	1.000	.947

Extraction Method: Principal Component Analysis.

We also applied multiple regression analysis on the collected data, the generated results are shown in table 2 below:

Table 2. Results of Multiple Regression Analysis

(Arrangement: Beta coefficients, standard error in parenthesis, t-value in brackets and p-value in italics. Also, values of R, R-square and F statistics of the research model are presented below)					
Constant	TBT	Model Strength and ANOVA Results			
		R	R-Square	F-Stats F value	Sig.
1.165 (.169) [6.911] .000	.198 (.077) [2.561] .024	.579	.335	6.557	.024
Constant: "Export Performance (EP)" (Dependent variable)					
Technical Barriers to Trade (TBT)(Independent Variable)					

TBT consists of three fields as, technical rules, standards, and conformity procedures. The ordinary principals and rules that are appropriate, were, non discrimination (Most Favored Nation and National Treatment), the avoidance of unwanted obstacles to international trade, harmonization, use of international standards, equivalence and mutual recognition, and transparency. Harmonization was basically the back bone of TBT. It was required that members actively participate in the making of standards. They also implement the international standards as the foundation for international standards and rules. In addition to that they also ought to

prepare guide and proposals for conformity assessment procedures. It was mandatory for the members to publish or create obtainable technical rules, standards, and conformity assessment procedures to differentiate other members.

Obligatory standards and technical rules plus international standards were vital factors that had an effect on domestic sales and therefore the ability to export. Production and investment costs had a tendency to be higher for companies that face technical regulations, and therefore the investment for conformity was usually up to 10% of the entire investment expenditure. At firm

level, the restricted access to credits and low demand were the foremost crucial obstruction to business among each exporting and non-exporting company. Product quality and presence of excessive demand were major factors to enhance the ability to export. Technical regulations and standards had an effect on trade in many ways: assisting exchange by defining product features and improving compatibility and utility, enhance domestic social aims like implementing standards and safety needs, public health and enhance protectionist policies.

It was compulsory for the members to make sure that technical rules and standards do not limit trade. However it was arguable that domestic regulations were a form of protectionism. Developing countries argued that they have a very little influence in the formulation of the standards and that the developed countries mostly have the say which give them an unfair advantage. This was also referred as techno-imperialism.

TBT is being used as a barrier to imports. The developing countries face problems to invest in domestic economy to improve it to satisfy the international and national standards of developed countries, because they have less technical know-how and lack of assessing and standardizing laboratories. Resultantly they are denied market access. To overcome this, the exporting firms have to increase their efficiency by conforming to international standards.

The positive impact of trade barriers on export performance of textile industry of Pakistan is in line with the study of (Weisbrot and Baker, 2002). It reported that TBT had a positive impact on the productivity and export performance of textile industry of Pakistan.

Conclusion: Considering Table-2, the study has established positive impact of TBT on the export performance of the textile industry of Pakistan during period 1990 to 2005.

REFERENCES

- Amsden, A.: Asia's next giant. *New York, OUP*. (1989).
- Broberg M.: *European Food Safety Regulation and the Developing Countries*. DIIS . (2009).
- Dollar, D., and A. Kraay: Trade, Growth and Poverty. *European Journal of Political Economy*. 22 (3): 639-652 (2001).
- Dollar, D: Outward-oriented development economies really do grow more rapidly: Evidence from 95 LDC's, 1976-85. *Economic development and cultural Change*, pp. 523-544 (1992).
- Geoffrey B.: *Agricultural Export: Technical Barrier to Trade*. National Library for the Environment. (1997).
- Grossman, G. M. and E. Helpman: Innovation and growth in the global economy. *Interim Poverty Reduction Strategy Paper*. Cambridge, Ma and London: The MIT Press (1991).
- Hafiz, B. and J. A. N. Shaari: Confirmatory Factor Analysis (CFA) of first order measurement model -ICT empowerment in Nigeria, *International Journal of Business Management and Administration* Vol. 2(5), xxx-xxx. Available at: <http://www.academia.edu> (2013)
- Hair, J. F., R. E. Anderson, R. L. Tatham, and W. C. Black: *Multivariate data analysis with readings* (4th ed.) Englewood Cliffs, NJ: Prentice Hall. (1995).
- Hair, J. F., C. B. William, J. B. Barry, and E. A. Rolph: *Multivariate Data Analysis* 7th edition, (2010).
- Kardar, S.: *Political Economy of Pakistan*. Progressive Publishers, Lahore (1997).
- Krueger, A.: Foreign trade regimes and economic development: Anatomy and consequences of exchange control regimes: New York: NBER. 1998. Why trade liberalization is good for growth. *The Economic Journal*, 108: 1513-1522 (1978).
- MAIA, and IFM.: *Final Report on, Market Access Analysis to identify and update the existing information on trade barriers in third countries affecting EU exports of textile and clothing, footwear and leather*. Brussels (2004).
- Ocampo, J. and L. Taylor: Trade liberalisation in developing economies: Modest benefit but problem with productivity growth, macro prices and income distribution. *The Economic Journal*, 108(450): (1998).
- Pakistan Economic Survey. *Economic survey report* (2001).
- Pricewaterhouse, C.: Final report on Identification and analysis of trade barriers in Indonesia, Thailand, Malaysia and the Philippines. *World Trade Management Services*, 1 (2001).
- Rodriguez, F. and D. Rodrik: Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence, in B. Berne and K. Rogoff. *NBER Macroeconomics Annual* (2000).
- Sachs, J., and A. Warner: Economic reform and the process of global integration. *Brookings Papers on Economic Activity*. Pp. 1-118 (1995).
- Wade, R.: Governing the market; Economic theory and the role of government in East Asian industrialisation. *New Jersey* (1990).
- Weisbrot, M., and D. Baker: The relative impact of trade on developing countries. *Center for economic policy research briefing paper*. Washington D.C (2002).
- World Bank. *World Bank Report*. www.worldbank.org. (1987).