



Munich Personal RePEc Archive

Innovation Strategies in Indian Textile Sector – Evidence from Surat Textile Cluster

Pohit, Sanjib and Jamal, Tabassum and Suman, Yogesh and Kumar Yadav, Nitesh and Kumar Saini, Mahesh

CSIR-National Institute of Science, Technology, and Development Studies

30 March 2016

Online at <https://mpra.ub.uni-muenchen.de/70470/>
MPRA Paper No. 70470, posted 16 Apr 2016 16:31 UTC

Innovation Strategies in Indian Textile Sector –

Evidence from Surat Textile Cluster¹

Sanjib Pohit, Tabassum Jamal, Yogesh Suman,

Nitesh Kumar Yadav, Mahesh Kumar Saini

Abstract

Though India has comparative advantage in labour intensive sector like textile, India's performance in this sector is not too impressive on the export front. In this context, this paper argues that lack of innovation culture could be one of the principal reasons for India's poor performance. This hypothesis is tested by conducting primary survey in one of the more dynamic textile cluster in Northern India namely, Surat and adjoining areas. Our findings do indicate lack of product as well as organisational innovation culture in this region, which may be a serious bottleneck in competitive export market. We do find that firms score well in respect of marketing innovation which probably suggests that competitive pressure has increased due to the globalization of the economy. Firms are also found to be keen in respect of process innovation to reduce cost in the aftermath of increased pace of competition in the sector.

¹This work is supported by India S&T Innovation Policy Project of CSIR-NISTADS. We would like to acknowledge Jyotsana Pandey for able research assistance. The views expressed in the paper are those of the authors and not of the institute to which they belong.

1. Introduction

At the outset, it is expected that a labour surplus economy like India should thrive in labour intensive sector like textile. This seems to be true in the Indian economy as the same contributes to about 14% to India's industrial production, provides direct employment to over 45 million people (the second largest provider of employment after agriculture) and another 54.85 million people are engaged in its allied activities (see CII). However even though India is the second largest producer of textiles and garments, it is not doing too well in the export front. For instance, the average share of India exports in world textile exports under 136 items of 4-digit harmonized series 2007 product code stands at about 0.05 during the period 2013-2014.² By contrast, the share of China stands at 0.39. In most of the items, India's share is nowhere in comparison to China barring low value items such as yarn (silk, wool, cotton, etc) or jute based products where India's share is significantly high at 0.23. The difference is stark in case of high value products such as woven fabrics, dresses (men/women/baby), undergarments. In most of these items, India's share is in the range 0.05-0.01 and close to smaller countries like Pakistan, Sri Lanka, etc. On the other hand, China's share is invariably highly than 0.30 and in some products more than 0.6 of world's exports.

This calls into question whether India has adopted right innovation strategies to market its competitive advantage in the global market. The literature argues that innovation is the key to a better performance and considered as a prerequisite for business survival. It is true irrespective of the size of the enterprise. Some authors such as Craig, Jackson and Thomson (2006, 2007) argue that small businesses acts as a growth incubator and this is where new ideas transform into viable businesses. Since Indian textile sector is characterized by small scale units, it is important to understand why this sector is not doing too well in the competitive global market. Over the years, India is becoming more open with low import

² Author's estimate based on World Bank's WITS database, extracted on 7.10.2015

tariff. Consequently, it is not farfetched to think that domestic producers would also face competition from foreign players in the domestic market. Thus the search for competitive advantage is vital for textile sector's survival and growth and innovation is identified as a key factor for survival/growth by several studies (Lall et al, 2004; Ministry of Textiles, 2014)

The textile sector in India is located in many cluster and they differs in sizes, technologies, and products. To understand the innovation strategies of this sector in the Indian context, a field level primary survey involving interactions with entrepreneur is essential as secondary source of information is scanty in this respect. However, an all-India survey is both time consuming as well as a costly exercise. Consequently, we have undertaken an in-depth survey in one of dynamic cluster of northern India namely Surat to understand the innovation dynamics in this sector. Of course, a survey from one cluster has its own limitation. However, we believe it would provide useful policy insight for this sector's growth.

The plan of the rest of the paper is as follows. Section 2 provides an overview of the textile cluster. Section 3 gives the framework of innovation under which the survey results are analyzed. Section 4 discusses the result of our field level survey. Finally, section 5 provides concluding remarks and policy recommendations.

2. Overview of Surat textile cluster

In recent years, Surat has emerged as the textile city of Northern India and has eclipsed in many respect older textile cluster like Varanasi. Unlike other textile cluster in Northern India, the product composition in Surat is diverse encompassing yarn production (natural as well as synthetic), weaving, processing, and embroidery items. One of the main reasons behind the growth of Surat's textile industry is the city's ability to adapt to changes and the latest trends. The city is quick to respond to any changes in the preferences of people. The famous brands

of Garden and Vimal textiles have originated from Surat. The major market for Surat textile products are India and other Asian countries (Middle East). However, international demand for its products is not very significant.

In the competitive globalised world, all enterprises strive to make innovation as a prerequisite for business survival. The enterprises in the Surat textile belt are no exception to this trend. . With over 6,00,000 power looms, 375 Fabric Processing Units, 400 Texturising plants, 75,000 Embroidery Machines, 2.5 crore meters daily synthetic grey fabric production, 150 textile markets with more than 45,000 traders and exporters have made Surat the prominent centre for textile in India.³ Nearly 70,000 new Shuttle less looms is expected to start functioning in coming 2 to 3 years. It has been attracting heavy new investment and huge modernization program from dynamic entrepreneurs in the region concomitant with state's industry friendly policies, such as *Technology Up gradation Fund Scheme*, and *Integrated Textile Parks*. The large number of industrialist is eyeing at ultra-modern Weaving, Yarn Preparatory and Fabric Dyeing-Printing- Processing & Value Adding technology & machineries. Currently, the focus is on product quality and marketing (namely targeting niche markets with higher value added). The vibrant growth of Surat Textile cluster naturally raises question regarding the factors that have contributed to this growth. It also raises question why more matured textile cluster in Northern India like Varanasi has not able to replicate Surat's model. In this context, we attempt to understand the innovation strategies adopted by enterprises of Surat cluster for its successful growth. However as innovation have multifaceted dimensions, we elaborate in the next section regarding the facet of innovations that our paper has examined in the context of Surat textile cluster.

³Based on authors'' feedback with stake-holders at Surat and Surat (2015)

3. Understanding Innovation

At the outset, we have argued that India is not able to make significant stride in the world textile market even though India has comparative advantage in labour intensive sectors like textile. In this context, we want to examine whether absence or low level of innovations or wrong innovation strategies is the root cause for low level of performance of India's textile sector in the global market. This has been attempted by analysing the firm characteristics in the Surat textile belt, one of the dynamic and modern textile sectors in the northern belt.

Since innovation has multifaceted connotation, we need to elaborate on what measures of innovation we adopt in our study for analyzing Surat textile cluster. Originally, Schumpeter (1939) defined innovation as simply "any way of doing things differently". However, subsequent researchers have broadened this definition by classifying innovation under different dimensions and standards. For instance, Schumpeter (1942) argued that innovation makes a firm differentiated from its competitor while Bhattacharya et al (2013) opines that innovations are essential for a firm to be competitive. On the other hand, Rogers (1995) argues that innovation is also a question of organisational culture and it must be promoted in order to benefit from it. Thus broadly speaking, innovation is understood in today's world to include following (see Diniz et al, 2015):

- (a) New goods/services or new processes that leads enterprise to a better performance
- (b) New production methods
- (c) Opening up new markets
- (d) New sources of raw materials, that might lead to sustainable production increases
- (e) New forms of organisation.

These dimensions of innovations are classified under Oslo manual, a reference treaty on innovations, as follows (OECD, 2005):

1. Product Innovation: signifies significant changes in the capabilities of goods or services. It encompasses entirely new products or vastly improved products;
2. Process innovation: indicates major changes in production and delivery methods which gives the enterprise a competitive edge;
3. Organisational Innovation: signifies implementation of new organisational methods encompassing changes in business practices, workplace organisation or in firms's external relations;
4. Marketing innovation: comprises changes in product design, packaging, product promotion and pricing issues.

Under this nomenclature, we want to understand innovation strategies in the Surat textile cluster. This would provide policy insights into making textile sector globally competitive. The study is based on primary survey in the above mentioned cluster, the methodology of same along with the result is described in the next section.

4. The Data and Analysis of Results

Information was solicited from different textiles enterprises around Surat using structured questionnaires. The questionnaire covers qualitative as well as quantitative questions on various aspects of innovation. The field visit was conducted during the period August 2014 to February 2015. Though information was sought from about 200 enterprises, properly filled in question was obtained from 47 MSME units. The respondent firms were divided into various parameters of innovation which was identified by correlation between different types of innovation.

At the outset, the responses are classified into innovative and non innovative enterprises by identifying firm that has adopted at least one innovation strategy among the

above four specified dimensions of innovation. Subsequently, we categorised innovation activities into the above four types of innovation as described below.

- Product Innovation - collating responses from all firms that has reported new or significantly improved product in the last financial year
- Process Innovation - collating responses from firms that has reported in the questionnaires any one of the following activities in the last financial year (a) adopting new or significantly improved production methods, (b) implementing new or significantly improved process support activities (c) operating new/improved logistics, delivery and distribution methods of resource inputs and output
- Marketing Innovation - counting responses from all firms that have reported affirmative on the followings: (a) new techniques or media to promote goods (b) new methods of product distribution, financing, etc.
- Organizational Innovation - counting responses from all firms that have reported affirmative on any of the following accounts: (a) new business practices in the organization procedures; (b) new methods of decision making; and (c) introducing new methods of organizing external relations with other companies or standard, such as conforming to global standard, national standard, conforming goods to choice of customers

Again, we give the score “1” if the enterprise is innovative and “0” if it has not adopted any innovation strategies

Table 1 provides a snapshot of various dimensions of innovation activities of our surveyed enterprises. As this table shows, 15% companies carry out innovation in the field of product development, 87% in process innovation, 73% in marketing innovation and 47% in respect of organizational innovation. The question naturally arises whether a firm choose to

concentrate simultaneously on more than one innovation activities to maintain its competitive edge. These relationships are examined in the subsequent tables.

[Insert Table 1]

Table 2 presents our findings in respect of product and process innovation. As this table indicates, 8.33% of firms are innovating simultaneously in product as well as process innovation. However, as our sample is low in respect of product innovating firms, the result should be taken with caution. Note that among the firms that do not exhibit product innovation, nearly 80% of them displays process innovation. This is expected since it is easier to undertake process innovation than product innovation. Moreover, firms always on the move to undertake process innovation to counter competition from its rival firms.

[Insert Table 2]

With regard to the relationship between product innovation and organizational innovation, Table 3 indicates about 2% of product innovating firms are innovating in respect of organizational count. Note that only 31% of firms in our sample have undertaken organizational innovation. This is not a good sign as organization innovation is the indicator in the sample that exhibits how well the firms confirm its products to global/national or client's standard, which is must if it intends to seek new market (out of India or different parts of India).

[Insert Table 3]

On the other hand, Table 4 indicates that all product innovating firms also exhibit marketing innovating characteristics. This is expected since marketing innovation is essential

for business development for the newly development products. Since our survey captures more of process innovation, it would be interesting to examine the innovation dynamics of process vis-à-vis marketing and organization aspect.

[Insert Table 4]

Table 5 (Table 6) presents our survey results on interplay between process innovation and organizational (marketing) innovations. The data in Table 5 indicates that 60% of process innovating firms also display marketing innovation. This behavior is not surprising since these firms expects, on the margin, increase in marketing innovation may help them to expand their market. On the other hand, we find that process innovating firms typically do not score high (30%) on organizational innovation (Table 6).

[Insert Table 5]

[Insert Table 6]

We also explored in our structured questionnaires what are the main three out-firms factors of innovation. The respondents indicated that the top 3 factors were quality improvement in design, customer's pressure and competitive pressure from other private firms.⁴ On the other hand, the top 3 in-firm factors of innovations are found to be presence of skilled workers, supervisor's intervention and feedback from marketing team.

Finally, we examine the interplay between marketing and organizational innovation in our surveyed enterprises. The results are shown in Table 7. As this table shows, only 12% of organization innovating firms also undertake marketing innovation. This does not augur well since intense competitive pressure implies one has to always undertake marketing innovation to create new market for its growth. Alternatively, these suggest why India figures so low in world's textile market.

[Insert Table 7]

⁴ Similar questions were also asked in case of product innovation. These are not reported here since we have low response rate in case of product innovation.

In summing up, it must be emphasized that a successful firm needs to score well on all types of innovation, especially in competitive markets. This is best understood when we compare profit to turnover ratio to innovation scores (Table 8). We find that rate of profit of profit is close for all types of innovation barring organization innovation.

[Insert Table 8]

5. Concluding Remarks:

It seems evident from the results presented above that there is a lack of an innovative culture in the Surat Textile industry in respect of product innovation. If we leave this dimension of innovation, we find that that innovation exists, and it has been fostering this sector. The most representative dimensions in our sample are process innovation. These results are valid both at individual analysis and on cross tabulations. Besides process innovation, marketing innovations is mostly adopted by enterprises as an additional stratum of innovation strategy.

The absence of product innovation is a policy concern. In the globalized competitive market, product innovation is essential for catering to consumer's preferences. The poor score of enterprises in respect of organisation innovation is also a worry since it signifies that the products do not confirm to global/national standards. It is difficult to sustain this sector's growth and exports unless enterprises are pro-active towards product/organisational innovation. The policy-makers need to create enabling environment for same. In our

interactions with firms, respondents typically raised the issue of finance and cost of capital for undertaking product innovations.

Reference:

1. Confederation of Indian Textile Industry (CII),
<http://www.citiindia.com/textile-industry/indian-textiles-overview.html>
2. http://texmin.nic.in/policy/TOR_CMTA_Surat_CPCDS.pdf
3. Surat (2015) Textile Expo, <http://www.textileexpo.in/eventinfo.aspx>
4. Craig, Ben R., William E. Jackson, III, and James B. Thomson. (2006) “On SBA Guaranteed Lending and Economic Growth,” *Economic Development through Entrepreneurship: Government, University, and Business Linkages (New Horizons in Entrepreneurship)*, Edward Elgar Publishing, pp. 127–50.
5. Craig, Ben R., William E. Jackson, III, and James B. Thomson. (2007). “SBA-Loan Guarantees and Local Economic Growth,” *Journal of Small Business Management*, vol. 45, pp. 116–32.
6. Diniz, F., R. Vaz, N. Duarte (2015) “Innovation Strategies in the Portuguese Footwear Industry,” *International Journal of Contemporary Management*, vol. 14, no. 1, pp. 37-50.
7. Lall, Somik V., Zmarak Shalizi , and Uwe Deichmann (2004) “Agglomeration economies and productivity in Indian industry,” *Journal of Development Economics*, Volume 73, Issue 2, Pages 643–673
8. Ministry of Textiles (2014), “Innovation in the Textile and Apparel Industry,” <http://texmin.nic.in/reports/Innovations%20in%20Textile%20and%20Apparel%20Industry.pdf>

9. OECD. (2005). Oslo Manual Guidelines For Collecting and Interpreting Innovation in Communities. (Array, Ed.) Eurostat (Vol. Third edit). OECD Publishing.
10. Bhattacharya, S., Garg, K.C., n. Kumar, K. Mehra, Sanjib Pohit, P. Nath, R. Raina (2013) *India: Science and Technology*, CSIR-NISTADS, Cambridge University Press.
11. Rogers, E., M. (1995) "Diffusion of Innovations," in *Elements of Diffusion*, pp. 1-20, doi: citeulike-article-id: 126680.
12. Schumpeter (1939) *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process*, Social Science and Medicine, 1982 (vol. 64).
13. Schumpeter (1942) *Capitalism, Socialism and Democracy*, New York Harper.

Table 1 Innovation Activities by Types

Companies with	Innovation
Product development	14.58%
Process innovation	87.50%
Marketing innovation	72.91%
Organizational innovation	47%

Source: own survey

Table 2 Product and Process Innovation

Companies with			Process innovation		Total
			No	Yes	
Product Innovation	No	Count	3	38	41
		% of total	6.25%	79.16%	85.41%
	Yes	Count	3	4	7
		% of total	6.25%	8.33%	14.58%
Total		Count	6	42	48
		% of total	12.50%	87.49%	100%

Source: own survey

Table 3: Product and Organizational Innovation

Companies with			Organizational Innovation		Total
			No	Yes	
Product Innovation	No	Count	27	14	41
		% of total	56.25%	29.16%	85.41%
	Yes	Count	6	1	7
		% of total	12.5%	2.08%	14.58%
Total		Count	33	15	48
		% of total	68.75%	31.24%	100%

Source: own survey

Table 4: Product and Marketing Innovation

Companies with			Marketing innovation		Total
			No	Yes	
Product Innovation	No	Count	13	28	41
		% of total	27.08%	58.33%	85.41%
	Yes	Count	0	7	7
		% of total	0 %	14.58 %	14.58%
Total		Count	13	35	48
		% of total	27.08 %	72.91%	100%

Source: own survey

Table 5: Process and Marketing Innovation

Companies with			Marketing Innovation		Total
			No	Yes	
Process Innovation	No	Count	1	6	7
		% of total	2.08 %	12.5 %	14.13 %
	Yes	Count	12	29	41
		% of total	25 %	60.41 %	85.41%
Total		Count	13	35	48
		% of total	27.08%	72.91%	100%

Source: own survey

Table 6: Process and Organizational Innovation

Companies with			Organizational Innovation		Total
			No	Yes	
Process Innovation	No	Count	6	1	7
		% of total	12.5 %	2.08%	14.58 %
	Yes	Count	28	13	41
		% of total	58.33%	27.08%	85.43%
Total		Count	34	14	48
		% of total	70.83%	29.16%	100 %

Source: own survey

Table 7: Organization and Marketing Innovation

Companies with			Marketing innovation		Total
			No	Yes	
Organization Innovation	No	Count	28	26	54
		% of total	43%	41%	84%
	Yes	Count	2	8	10
		% of total	3%	12 %	15%
Total		Count	30	34	64
		% of total	46%	53%	100%

Source: own survey

Table 8: Innovation and Profit Rate/Turn over

Innovation	Profit /Turnover ratio
Product innovation	0.27
Process innovation	0.28
Organization Innovation	0.18
Marketing innovation	0.30

Source: own survey

