



The Sectoral Analysis of Surgical Instruments of Pakistan.

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(Draft Report)

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CONTENTS

Introduction:	5
Objective of the study:.....	6
Scope of the Study:	6
Methodology:.....	7
1. Export market of Pakistan’s Surgical Instruments:.....	8
2. Trade Comparison of Pakistan and India in world market:	9
3. Import Market of India for Surgical Instruments:.....	10
4. Existing Bilateral Trade between Pakistan and India of Surgical Instruments:	11
5. SWOT Analysis:	14
a) Strengths	14
b) Weaknesses	14
c) Opportunities.....	15
d) Threats.....	16
6. Challenges/Barriers:.....	16
7. Non-Tariff Barriers in India:.....	17
8. Suggestions:	18
a) Establishment of Surgical Instruments Training Institute:.....	18
b) Establishment of R&D Cell in the Training Institute:	18
c) Establishment of Common Facility Centre:.....	19
d) Up gradation of SIMTEL:.....	19
e) To Encourage New Brands:	19
f) Support for Certifications:	19
g) Networking through Cluster Development Programme:	19
h) Marketing:.....	19
9. Conclusion:	20
10. Annexures	22

Introduction:

The industry of surgical instruments is one of the leading industries of Pakistan having capital investment of more than Rs. 20 billion¹. The world market for surgical instruments is over US \$ 30 billion. Pakistan's total export in this sector stands at US \$ 225 million (2009-10)². The sector comprises of over 2300 companies, of which around 30 can be considered large and the remainder can be split as 150 units of medium size and remaining as small. The surgical industry produces on average over 150 million pieces a year with an estimated value of around Rs 22 billion. This figure implies that the sector contributes 0.42% to the national GDP. This is not significantly large, however it has a wide range of supporting industries such as steel, chemicals, machine parts and a large vendor base and thus it has strong linkages with the other industries in the economy. Out of the total production, approximately over 95% is exported. According to the Surgical Instruments Manufacturing Association of Pakistan one employment in industry creates 3-4 indirect employments. Since employment in the surgical industry is around 100,000-150,000, so according to the statement given by Surgical Instruments Manufacturing Association of Pakistan, 300,000 to 400,000 labor force is engaged with this sector directly or indirectly³. The surgical instruments sector is a key SME export sector of Pakistan with significant vertical linkages with other sectors of the economy. The sector contributes in multiple ways to the national economy. It offers pro-poor employment opportunities, income generation, foreign exchange and social development by paving the way to development in and around Sialkot.

The export of this sector is of two categories; the export of disposable instruments and the export of reusable instruments. Most of the industrial units of surgical instruments are based in Sialkot. Over 98% of the country's production of surgical sector is centered at Sialkot⁴.

¹ Source: SIMAP website (Surgical Instruments manufacturing association of Pakistan)

² Source: Trademap

³ Khan, Usman and Haroon, Ali. *Draft Report on Industrial Sectors*. UNIDO's TRADE RELATED TECHNICAL ASSISTANCE (TRTA II) PROGRAMME, 2010.

⁴ Source: BOI' report on Pakistan Light Engineering Sector

Objective of the study:

Pakistan has recently liberalized its trade with India. In the wake of this liberalization, there will be some challenges and threats that may emerge as the repercussions of this trade liberalization.

In the light of above, this study is being conducted with the following objectives:

1. Identification of segments of surgical industry which are competitive or not competitive vis a vis India.
2. Identification of India's export potential for surgical sector in Pakistan.
3. Identification of Pakistan's export potential for surgical sector in India.
4. Identify the comparative tariffs of Pakistan and India for the particular product range.
5. Identification of NTBs that need to be addressed to facilitate exports of the surgical sector towards India.

Scope of the Study:

The scope of this report is focused on Pak-India trade in surgical sector. This analysis used the trade statistics of calendar year 2010 because the detailed trade data of year 2011 was not available. For this purpose; six broad categories can be defined at HS-4 under which Pakistan is exporting surgical sector to the world market. The categories include;

- (i) HS Code 9018 – Instruments for medical, surgical and dental;
- (ii) HS Code 9021 – Orthopedic appliances;
- (iii) HS Code 9022 – Equipment using X-rays, alpha, beta, gamma rays and
- (iv) HS Code 9402 – Med, surg, dental furniture (e.g. dentists' & barbers' chairs)
- (v) HS Code 8213 – Scissors, tailors' shears and similar shears, and blades thereof
- (vi) HS Code 8214 – Article of cutlery, knives, cleavers, pedicure sets

This report is based primarily on desk research. Due to time, resource and budgetary constraints interaction with stakeholders was not possible. So this analysis is more

focused on statistical data analysis rather than direct input and feedback from the relevant stakeholders.

Methodology:

The study is mostly based on descriptive analysis however analytical work is based on empirical analysis in order to analyze trade comparisons and competitiveness. The study used the website of International Trade Centre as basic data source for this analysis. The first part of this analysis deals with the export destinations of Pakistan in surgical sector in the world with their respective export shares. The information for this part was obtained from secondary sources like trade map and SIMAP. The second part highlights the export comparison between Pakistan and India to the world with their export shares captured in the world market. To analyze the import of India in surgical sector from the world the next part covers the major exporters to the India in surgical sector. After this, the trade comparison between Pakistan was analyzed on the basis of existing bilateral trade between them. The tariff rates offered by each country to other were also analyzed in this part. The product lines which are in the negative list of Pakistan were seen in the analysis. A detailed SWOT analysis was done in order to highlight strengths, weaknesses, opportunities and threats to the surgical sector of Pakistan. The competitiveness comparison in SWOT analysis was backed with statistical calculations like Revealed Comparative Advantage index (RCA) of Pakistan and India (Annexure 1)⁵.

⁵ Annexure 1: Revealed Comparative Advantage for Pakistan and India

1. Export market of Pakistan's Surgical Instruments:

Currently, Pakistan is capturing only 0.75 percent of the total world market of surgical instruments. Most of the major export destinations of Pakistan are in Europe and USA.

Figure 1: Export from Pakistan to the World in Surgical Sector.



Source: SIMAP and Trademap (trade data of 2010)

As the main focal market in this study is India so above pie chart shows that Pakistan exports 1.77 percent of its total exports in this sector towards India. India comes in the top ten export destinations of Pakistan in this sector. As Pakistan is already capturing some shares in Indian market so by overcoming the weaknesses and removing the non-tariff barriers in Indian market Pakistan can raise its exports towards India. Meanwhile, these measures can help to defend Pakistan's surgical sector in case of liberal trade with India in future.

2. Trade Comparison of Pakistan and India in world market:

In this study, trade comparison has been done on the basis of export volume in the world market with the assumption that the country having more exports has relatively more export potential or capacity. The following table following depicts the comparison between two countries.

Table 1: Export analysis of Pakistan and India towards world in terms of volumes and shares

HS-Codes	Product label	Export Volume to the World Market with Percentage shares			
		From Pakistan	Percentage Shares	From India	Percentage Shares
901831	Syringes, with or without needles	0.129	0.003	13.673	0.362
901890	Instruments and appliances used in medical or veterinary sciences, nes	219	0.593	122.279	0.331
901849	Instruments and appliances, used in dental sciences, nes	11.816	0.349	2.672	0.079
901850	Ophthalmic instruments and appliances, nes	0.002	0.000	13.872	0.514
940290	Medical, surgical, dental or veterinary furniture and parts nes	0.11	0.004	6.393	0.250
821300	Scissors, tailors' shears and similar shears, and blades therefor	5.285	0.946	0.184	0.033
821420	Manicure or pedicure sets and instruments (including nail files	52.68	13.029	4.341	1.074
'902110	Orthopaedic or fracture appliances	0.081	0.001	8.263	0.135
'902190	Orthopedic&other appliances,worn,carried or implanted in the body,nes	0.093	0.001	3.331	0.031
'902121	Artificial teeth	0.107	0.018	1.07	0.184
'902129	Dental fittings, nes	0.02	0.001	2.116	0.118
'902131	Artificial joints for orthopaedic purposes	0	0.000	1.023	0.016
'902150	Pacemakers for stimulating heart muscles,excluding parts & accessories	0	0.000	0.52	0.008
'902139	Artificial parts of the body (excl. artificial teeth and dental fittin	0.023	0.000	3.821	0.055
'902140	Hearing aids, excluding parts and accessories	0	0.000	2.186	0.074

Source: Trademap (in US million dollars)

The market analysis in the above table shows that shows the mixed trend i.e. in some products Pakistan is capturing more shares in world market and in some products India is capturing more shares.

In products **901890** (Instruments and appliances used in medical or veterinary sciences, nes), **901849** (Instruments and appliances, used in dental sciences, nes), **821300** (Scissors, tailors' shears and similar shears, and blades therefor) and **821420** (Manicure or pedicure sets and instruments (including nail files), Pakistan has advantage over India by capturing more export shares of world market. While in products **'902110** (Orthopaedic or fracture appliances), **'902121**(Artificial teeth), **'902129** (Dental fittings, nes) and **'902190** (Orthopedic&other appliances,worn,carried or implanted in the body,nes) India is capturing more shares than Pakistan in world market showing relative advantage in these products over Pakistan.

3. Import Market of India for Surgical Instruments:

Table 2: Top ten Importing Countries to India in Surgical Sector

Exporters	Imported value in 2010
United States of America	929.435
Germany	618.028
China	508.113
Japan	353.876
Singapore	205.906
Republic of Korea	198.311
United Kingdom	154.163
Switzerland	128.539
France	126.343
Italy	85.507

Source: Trademap (values in US million Dollars)

India is a big market for surgical instruments. According to the trade statistics of year 2010 given in Table 2, India imported surgical instruments worth US \$ 4110.171 million. USA is the biggest exporter of surgical instruments to the Indian market and it exported the surgical instruments worth US \$ 929.435 million in the year 2010. Germany, China and Japan come after USA which are exporting surgical instruments to India.

It is important to mention that USA and Germany are among the major export destinations of Pakistan for surgical instruments but they are exporting to India in the same sector.

By analyzing the products at HS-6 level this paradox reveals that Germany is importing products in the **tariff line 901890** (Instruments and appliances used in medical or veterinary sciences, nes) from Pakistan amounting to **US \$ 32.8 million**. And meanwhile, Germany is exporting the products under same tariff line to India worth **US \$ 334 million**.

Looking into import basket of India from USA, the same paradox comes forward, where USA imported products in tariff line **901890** (Instruments and appliances used in medical or veterinary sciences, nes) from Pakistan amounting to **US \$ 55.213 million** in year 2010 whereas, USA exported the products from the same tariff line to India in the same year worth **US \$ 89.4 million**.

4. Existing Bilateral Trade between Pakistan and India of Surgical Instruments:

The surgical sector is one among the few sectors of Pakistan in which trade exists between Pakistan and India. According to the trade statistics of 2010 (Trademap) Pakistan exported the surgical instruments to India of worth US \$ 4.3 million and in the same year India exported surgical instruments to Pakistan of worth US\$ 0.71 million. Bilateral trade between Pakistan and India can be seen on product level (HS-06) in the table given below.

Table 3: Existing Bilateral trade b/w Pakistan and India with applied tariff rates offered by India for Pakistan

HS-Codes	Product label	Pakistan's exports to India	Tariff Rate By India		India's exports to Pakistan	Tariff Rate By Pakistan	
			MFN Rate of India	SAFTA Preferential Rate offered by India		MFN Rate of Pakistan	SAFTA Preferential Rate offered by Pakistan
901831	Syringes, with or without needles	0	7.50%	8%	0	20%	5%
901890	Instruments and appliances used in medical or veterinary sciences, nes	3584	7.50%	8%	62	5%	5%

901849	Instruments and appliances, used in dental sciences, nes	713	7.50%	8%	0	10%	5%
901850	Ophthalmic instruments and appliances, nes	0	7.50%	8%	0	5%	5%
940290	Medical, surgical, dental or veterinary furniture and parts nes	0	8.00%		0	10%	N/A
821300	Scissors, tailors' shears and similar shears, and blades therefor	8	8.00%		0	25%	5%
821420	Manicure or pedicure sets and instruments (including nail files	55	8.00%		0	20%	5%
'902110	Orthopaedic or fracture appliances	9	7.50%	8%	9	5%	5%
'902190	Orthopedic&other appliances,worn,carried or implanted in the body,nes	0	7.50%	10%	0	5%	5%
'902121	Artificial teeth	0	7.50%	8%	0	5%	5%
'902140	Hearing aids, excluding parts and accessories	0	7.50%	8%	0	5%	5%
'902139	Artificial parts of the body (excl. artificial teeth and dental fittin	0	7.50%	8%	0	5%	5%
'902150	Pacemakers for stimulating heart muscles,excluding parts & accessories	0	7.50%	8%	0	5%	5%
'902129	Dental fittings, nes	0	7.50%	8%	0	5%	5%
'902131	Artificial joints for orthopaedic purposes	0	7.50%	8%	0	5%	5%

Sources: Trademap⁶. (In US\$ Thousands)

Mac map⁷.

Ministry of Commerce and Industry, India⁸

The products in which Pakistan exports more to India fall in '901890 (Instruments and appliances used in medical or veterinary sciences, nes). This tariff line earns the revenue of US \$

⁶ <http://www.trademap.org>

⁷ <http://www.macmap.org> (Tariffs applied by India, based on the data from 2009 using Harmonized System Nomenclature, to products originating from Pakistan)

⁸ <http://compendium.iift.ac.in>

3.58 million for Pakistan according to the trade statistics of 2010. The HS-6 tariff line ‘**901849** (Instruments and appliances, used in dental sciences, nes) is the second largest revenue earning tariff line for Pakistan in the surgical market of India. Pakistan earned the revenue of US \$ 0.71 million in year 2010 by exporting products falling under the export of this line. The products in HS-06 line ‘**821420** (Manicure or pedicure sets and instruments (including nail files) earned the revenue of US \$ 0.55 million for Pakistan from the surgical market of India.

Looking the other side for India, the analysis shows that India earns the revenue of US \$ 0.71 million from the surgical market of Pakistan. India deals with two lines on HS-06 in this regard. The products in HS-06 line ‘**901890** (Instruments and appliances used in medical or veterinary sciences, nes) earned the revenue of US \$ 0.62 million from the surgical market of Pakistan in year 2010. The products in HS-06 tariff line '**902110** (Orthopaedic or fracture appliances) earned the revenue of US \$ 0.09 million from the surgical market of Pakistan. Ten product lines of surgical sector are included in the negative list. These ten line items are given below

Table 4: Product Lines of Surgical Sector that are in Negative List

Serial No.	Product Code	Description	Customs Duty %
1	90031100	Frames and mountings for spectacles, goggles or the like, and parts thereof: Frames and mountings: Of plastics	10
2	90183110	Syringes with needles	20
3	90183120	Syringes without needles	20
4	90183200	Tubular metal needle/needle sutu	202
5	90183910	Dextrose,saline infusion sets	20
6	90183920	Dextro saline infus set,needles	20
7	90183940	Cannula	20
8	90184900	Instruments and appliances used in medical, surgical, dental or veterinary sciences,	10
9	90189030	Surgical scissors	5
10	90189040	Surgical knives	5

Source: Ministry of Industries⁹

⁹ <http://www.moip.gov.pk/1209%20list.pdf>

5. SWOT Analysis:

To assess the strengths and weaknesses and to highlight the opportunities and threats SWOT analysis is employed in the study.

a) Strengths

- The surgical instrument sector in Pakistan is working from the early 1900's. Under British rule, the doctors of that time used to send their surgical instruments to Sialkot for repair and further production. So it helped this industry to grow and flourish in this region.
- The Revealed Comparative Advantage analysis (RCA index) of surgical sector of Pakistan and India shows surgical sector of Pakistan is strong enough to compete with India in all the products of surgical sector in case of fully liberal trade. As the values of RCA index for Pakistan is significantly greater as compare to India which shows relative competitiveness of surgical sector of Pakistan over India. (See Annexure 1)
- The surgical instruments sector of Pakistan has good linkages with international market so it has a sound established distribution channel due to long export history towards world market. It can be seen from the export of Rs 22 billion of this sector with export destinations like USA, Germany and United Kingdom which are developed and leading economies of the world.
- Due to skilled and versatile experience the surgical instrument sector of Pakistan produces wide range of surgical products like Instruments for medical, surgical and dental, orthopedic appliances, Equipment using X-rays, alpha, beta, gamma rays etc.
- Due to richness of skilled labor and availability of other inputs, this sector is flexible in production systems. This richness is due to the long history of this sector in the region and flexibility in inputs means the inputs can be imported are obtained according to the desired level.
- Due to long history of surgical sector in Pakistan, the labor force of Sialkot region is specialized in this sector and easily available. So it's a very effective strength of surgical instruments sector of Pakistan having effective skilled labor.

b) Weaknesses

- There is lack of quality checks at local level because of which quality level is not consistent and smooth.

- The surgical sector of Pakistan is more focused on low-technology, low quality and low value products due to less homework on modern techniques and research.
- Because of increasing input costs of gas and electricity the profit margins are reducing day by day. It is hurting the competitiveness in this sector because of the cut-throat competition in world market.
- The labor force of Pakistan in this sector is informally trained. They don't have any formal institutions from where they can get any formal and specialized training.
- Because of the absence of proper training institutions the less trained work force is not capable to work with emerging technologies.
- The surgical instruments sector of Pakistan lacks in research and development which is very important in order to sustain and grow in international market.
- The surgical instrument sector of Pakistan has lack of linkages with the institutions who are offering different training courses on technical educations. These institutions include Technical education and vocational training authority and Punjab Technical Board of Technology.

c) Opportunities

- This sector is rapidly growing globally. So if surgical instruments sector of Pakistan works proactively according to the world demands then there is a lot of potential to capture in future.
- The surgical sector of Pakistan has opportunities in Indian market as shown by the Revealed comparative advantage analysis where Pakistan has far higher Revealed Comparative Advantage over India in product lines '821420 (Manicure or pedicure sets and instruments (including nail files) and '821300 (Scissors, tailors' shears and similar shears, and blades therefore) but Pakistan is exporting these product lines of just 55 and 8 thousand US dollars only. This charm for Pakistan is highlighted on the basis that India is net importer in these product lines and major exporters to the India in the tariff lines are importing products of these tariff lines from Pakistan (for details read Section "Import Market of India for Surgical Instruments" of the study).

(For RCA Index See Annexure 1)

- In international market of surgical instruments sector the demand of high tech products is rising. So if Pakistan diverts its surgical instruments industry to high tech from low tech then Pakistan can capture more shares of the emerging market size of this sector.
- The demand of surgical sector is relatively increasing more in African and Asian markets. So Pakistan needs to extend its export market towards Africa and Asia as currently it's more focused towards Europe and America.

d) Threats

- The diversifying international market is replacing the conventional surgical instruments with modern instruments. So there is threat for Pakistan to face hard times in future if proper measures are not taken in this regard.
- This market is becoming highly regulated as compared to the past. So now it's inevitable to follow new trends and styles that are internationally desired. Absence of these can cause serious setbacks to our surgical instruments sector.
- The labor force of Pakistan is not trained up to the diversifying and rising world demands. So this issue needs speedy intention from the concerned authorities and associations to develop training and research institutes for the labor force and management workers of this sector otherwise it can cause severe decline in global demand for surgical instruments of Pakistan.
- The diversifying global demand of surgical instruments demands Pakistan's immediate compliance with labor, quality, social and environmental standards according to the emerging trends.

6. Challenges/Barriers:

The surgical instrument sector lacks competitiveness due to inadequacy of specialized factors such as modern technology training institutes and research centers. As compared to other major players in the global surgical instrument and medical device market, like Germany, USA, and Switzerland etc Pakistan is far behind in technology and modern production processes. As discussed above this lack of technology results in inadequate productivity and higher costs of

production. The obstacle in achieving better technology is not only lack of capital but also lack of knowledge and appropriate skills to use modern technologies. The level of skills is low impeding investment into modern machinery.

As currently Pakistan is facing shortage of electricity and gas so this issue is increasing the production costs and deteriorating the competitiveness of surgical sector in world market.

The industry has access to SIMTEL¹⁰ and PCSIR¹¹, however, the capacity of these institutes to do meaningful research and product development is fairly limited. These institutes compare unfavorably to the research and training facilities that are available in countries which compete Pakistan in International markets.

One of the major problems is that Pakistan doesn't have any internationally known brand in the market of surgical instruments of the world. Due to this issue in some countries the products of Pakistan doesn't come into position to earn revenue at competitive price levels like other players of this sector.

Similarly, the inadequacy of worker skills is needed to be further enhanced as there is no specific training institute for workers.

7. Non-Tariff Barriers in India:

In the export of surgical instruments to India, some non-tariff barriers also have to be faced by the exporters.

First and the foremost problem in this regard is the visa processing by Indian authorities to the exporters of Pakistan. The Indian embassy takes long time in visa processing and holds their passports for that period. This is not affordable for the exporters and businessmen to get stuck their passports for such long period due to their busy routines. And many times their visa applications are refused without any serious objection or issue. In case of visa issuance they are only granted permission to travel for certain cities mentioned by the Indian embassy.

¹⁰ *Sialkot Material Testing Laboratory (SIMTEL)*

¹¹ *Pakistan Council of Scientific and Industrial Research (PCSIR)*

Further, one specific notification(**Notification No - 75/2006 - Customs (N.T.)**) was issued on 30th June, 2006 by Indian authorities to restrict the import of 180 tariff lines at HS-6 level having certain specifications. This notification was specifically for the countries under SAFTA agreement regarding rules of origin to be introduced for some 180 tariff lines at HS-6. In this notification some new rules were introduced for the import of some products from SAFTA countries on the basis of their composition and manufacturing scheme. Three tariff lines from surgical instruments are falling in these 180 tariff lines for which new rules were introduced in the notification.

Due to this notification the product lines mentioned in it come under restrictive import regime of India. Tariff line **900311** (Frames and mountings for spectacles, goggles or the like, and parts thereof: Frames and mountings: Of plastics) falls under tariff lines notified in the notification. According to the terms in the notification thirty percent value addition must be added by SAARC countries in case they export these tariff lines to India. Similarly, tariff line **901831** (Syringes without needles) which is about Syringes etc. are also subject to the same terms that their production should be taken place in the country from where it is being exported to India with at least thirty percent value addition. Tariff line **901890** (Anesthesia apparatus) which belong to the surgical instrument sector also comes under restrictive import policy of India by this notification.

8. Suggestions:

a) Establishment of Surgical Instruments Training Institute:

The strategy to address the above issues TEVTA and the private sector should start training courses in this regard so that the center is able to provide meaningful support to industrialists who are planning on making a shift for basic to high tech surgical instruments. In addition, a school of training for surgical workers is extremely important. This school should not only focus training basic production workers but also foreman's, engineers, managers, inventory controllers and quality control staff.

b) Establishment of R&D Cell in the Training Institute:

Due to emerging demands and requirement in international markets about surgical instruments, it is the need of hour to establish a competitive research and development cell specialized in surgical industry, especially assigned to conduct research on emerging threats and opportunities

in international market for surgical sector of Pakistan. Such institute can work under the supervision of Surgical Instruments Manufacturing Association of Pakistan or TDAP, Sialkot.

c) Establishment of Common Facility Centre:

Some facility centre should be constituted that can help the existing local manufacturers and new entrants into this industry. Such centre should provide full facilities regarding issues and charms in surgical sector and international market situations about input and output prices. Such centre should provide threats and opportunities and other relevant information about the surgical industry to the relevant stakeholders.

d) Up gradation of SIMTEL:

The SIMTEL needs immediately to be upgraded vertically and horizontally. As discussed above there are some tests and standard checks like, sterility tests that are not being provided by SIMTEL so these tests and standard checks are needed to be introduced in SIMTEL. The lack of these tests and standard checks is hurting the surgical sector as inefficiency.

e) To Encourage New Brands:

The related institutions should encourage the industrialists to launch new and competitive brands in the international market as famous and well-known brands can earn more revenue with more handsome price levels in the international market. Such brands should give services of internationally standard and quality to make reputation in the world market.

f) Support for Certifications:

The certifications should be granted to the manufacturers and exporters on easy terms. They should be facilitated in every respect by the concerned authorities in this regard.

g) Networking through Cluster Development Programme:

As the surgical sector is clustered in Sialkot so the networking and working relation among the surgical companies exist already. However, it needs to improve more by launching specialized industrial areas for this sector on the pattern of EPZA and Sindh State.

h) Marketing:

The government can launch vigorous campaign through its diplomatic and commercial missions in various countries by conducting exhibitions and EXPOS.

9. Conclusion:

The industry of surgical instruments of Pakistan is one of the top industries of Pakistan giving employment to a number of laborers of Pakistan and raising handsome revenues for the country and industrialists. However, some issues and problems are being faced by Pakistan in the international market in the export of this industry.

Pakistan doesn't have any well-known brand in the world market of surgical instruments despite of capturing significant shares in the world market. Due to this the surgical instruments made by Pakistan that are being exported to Germany and USA are being re-exported to other countries by them. For this we can see the evidence of tariff line 901890 in which Germany imports from Pakistan of worth 32.8 US dollars million meanwhile it is exporting the same tariff line to India of worth 334 US dollar million. A similar situation of this tariff line can be seen in USA. Where this tariff line is being imported of worth 55.21 million US dollars from Pakistan while in the same year 2010 USA exports the same tariff line to India of worth 89.4 million US dollars. This all is due to the non-presence of well known brand names in the sector of surgical instruments of Pakistan in international market. If Pakistan succeeds to develop good brand names in the international market of surgical instruments then it can help to raise the export revenues by significant rise.

The sector of surgical instrument is one among the few sectors of Pakistan's industry in which trade exists between Pakistan and India. So, by focusing the trade related issues and opportunities in this sector Pakistan can gain significant revenues from Indian market due to holding relative competitiveness in this sector. According to the trade statistics of year 2010, India is importing surgical instruments of US \$ 4110.171 million. USA is the biggest exporter of surgical instruments to the Indian market that exported the surgical instruments of worth US \$ 929.435 million in year 2010. Germany, China and Japan come after USA among the countries who are exporting surgical instruments to India. Thus such a big market in the neighbor country can help to generate significant revenues because the USA and Germany are among the top exporters to India while on the other hand they are importing in the same sector from Pakistan. This angle indicates the clear and net competitiveness of Pakistan to export India in surgical sector.

Furthermore, Pakistan is also facing some non-tariff barriers in the Indian market, If such issues and problems are resolved, then this sector of Pakistan can further be strengthened to compete in India and in the world market to capture more revenue for Pakistan.

10. Annexures

Annexure 1: Revealed Comparative Advantage for Pakistan and India

HS-Codes	Product description	Revealed Comparative Advantage Pakistan			Revealed Comparative Advantage India		
		Y 2008	Y 2009	Y 2010	Y 2008	Y 2009	Y 2010
'901890	Instruments and appliances used in medical or veterinary sciences, nes	6	5	4	0	0	0
'821420	Manicure or pedicure sets and instruments (including nail files)	42	53	91	1	1	1
'901849	Instruments and appliances, used in dental sciences, nes	2	2	2	0	0	0
'821300	Scissors, tailors' shears and similar shears, and blades therefor	13	12	7	0	0	0
'901831	Syringes, with or without needles	0	0	0	0	0	0
'940290	Medical, surgical, dental or veterinary furniture and parts nes	0	0	0	0	0	0
'902121	Artificial teeth	0	0	0	0	0	0
'902190	Orthopedic&other appliances,worn,carried or implanted in the body,nes	0	0	0	0	0	0
'902110	Orthopaedic or fracture appliances	0	0	0	0	0	0
'902139	Artificial parts of the body (excl. artificial teeth and dental fittin	0	0	0	0	0	0
'902129	Dental fittings, nes	0	0	0	0	0	0
'901850	Ophthalmic instruments and appliances, nes	0	0	0	0	0	0
'902150	Pacemakers for stimulating heart muscles,excluding parts & accessories	0	0	0	0	0	0
'902131	Artificial joints for orthopaedic purposes	0	0	0	0	0	0
'902140	Hearing aids, excluding parts and accessories	0	0	0	0	0	0