

## Cluster Study

### Ceramics sanitary Ware Gujranwala



Research and Development Cell

Gujranwala Chamber of Commerce and Industry

Aiwan-e-Tijarat Road, Gujranwala.

Phones:055-3256701-4 (4 lines), Fax:055-3254440

E-mail: [rnd@gcci.org.pk](mailto:rnd@gcci.org.pk), [info@gcci.org.pk](mailto:info@gcci.org.pk)

<http://www.gcci.org.pk>



## Table of Contents

1. Executive Summary .....		04
2. History and Back Ground.....		06
a. Ceramic Sanitary Ware .....		06
b. Geographical Location .....		07
c. Raw Material Suppliers .....		07
d. Raw Material Availability.....		08
e. Manufacturing.....		08
f. Quality Assurance.....		09
g. Machinery Suppliers.....		10
h. Technology Status.....		10
i. Marketing and Sales.....		10
j. Financing.....		11
k. Human Resource.....		11
3. Purpose of Study .....		12
4. Research Methodology.....		12
5. Questionnaire.....		12
6. Sampling Methodology and Sample Size.....		13
7. Respondents.....		13
8. Research Results.....		14
a. Current Export Trend .....		14
b. Installed Machinery.....		17
c. Capacity utilization.....		18
d. Establishment of Units.....		20



e. Legal Status of Organization.....	22
f. Ratio of Male and Female Workers.....	25
g. Products Manufactured and Sold.....	25
h. Distribution Channel.....	27
i. Supplier Of Raw Materials.....	29
9. Analysis.....	30
a. SWOT Analysis.....	30
b. Internal External (IE) Matrix.....	32
c. Strategic Position and Action Evaluation (SPACE) Matrix.....	33
d. TOWS Matrix.....	35
e. Quantitative strategic Profiling Matrix (QSPM).....	39
10. Suggestions and Recommendations.....	40
11. Limitations and Assumptions.....	42
12. Appendix-A.....	43
13. Appendix-B.....	48
14. References.....	49



## Executive Summary

The purpose of this study is to analyze the ceramic cluster from a perspective that gives information about the current industry problems and gives an insight toward the strategic direction of the industry as well. Our analysis shows that the industry is approaching towards maturity and unless we don't define a strategic direction, the industry life cycle may lead to decline. This study takes into account the proper SWOT analysis done on the basis of our research study conducted in person by visiting different factories and interviews with the industry people. Although government has taken numerous steps to support this industry and build capacity yet the question which this research study answers is what should be the strategic direction for the industry players. Only building capacity and upgrading technology is not the answer but these efforts should be canalized in a certain way.

By building capacity we can make more and sell more but do we still have to pursue with the existing products or within existing markets. Secondly, capacity building requires financial resources but the industry is totally relying on self generated finances and equity and since the industry is very low in financial strength as compared to other industries, the diffusion and adaptation of modern technology becomes a question.

This study has taken this perspective into consideration and suggested two strategies, market development and product development for the industrial owners who don't have enough equity to finance the technological upgrading or they are reluctant to invest further into assets by realizing the fact that the industry is getting stagnant unless new markets are explored.

It is also very necessary that awareness programs should be launched for the industry owners so that they can get finances from banks and use them for implementing changes in the manufacturing process and other operations.

Industry owners should also initiate consumer awareness program to reduce their dependencies from the retailers and dealers and create a pull for their products so that the



distribution channel partners don't influence the purchase decision of the final consumers.

Cluster, no doubt, brings several economies for the players but it may prove to be very sensitive and turn into red-ocean if the players of this cluster start competing with each other rather than the player of another region or cluster. This study is an effort to understand the current stage of the industry lifecycle, sources of contention and areas that can help the players to stand out of the crowd.



### **History & background of cluster:**

Gujranwala is quite known for its quality ceramics products. This industry not only caters the local market demand, but also contributes in exports to international markets. For years the manufacturers of this area have built their un-matched skills in design, aesthetics and quality. Their products speak for themselves and set higher standards of quality and excellence. The know-how about this industry is a result of technology and skill transfer from ICL, which was a result of collaboration with Belgium, but now the ceramic industry of Gujranwala is far ahead in quality and price as compared to ICL. Over the years this industry has expanded and resulted in a long chain of ceramics factories in this area and still they are growing.

### **Ceramics Sanitary Ware:**

Gujranwala ceramic industry can be divided into following five categories. Presently there are about 79 units in this sector, 60 are ceramic sanitary units, 11 are engaged in pottery (table ware) and there are about 8 refractories.

1. Electric Insulators
2. Sanitary Ware
3. Tiles
4. Tableware
5. Refractory (Fire bricks, Alumina bricks & Insulation bricks)

Amongst these categories, sanitary ware is a major sector. All these segments have approximately same raw material needs and in fact their suppliers are same too. Ceramics sanitary ware has great potential in local as well as in export market, therefore a large number of pottery units have shifted towards this industry. Currently the Ceramic sanitary ware industry of Gujranwala is manufacturing the following products in various designs, sizes and specifications:

- Washbasin
- Wash stand (Pedestal)



- Toilet combination
- Wall toilet
- Commode Set
- Bidet
- Urinal
- One-piece toilet
- Water Tank
- Vanity (Table tok)

### **Geographical Location**

Ceramics products are manufactured in many areas of Gujranwala. However the major cluster of sanitary ware products is on G.T. road towards Lahore, from Kamonke to Kangniwala. The biggest cluster of ceramics is G.T Road. Other major concentrations of ceramics sanitary ware are on Sheikhu-Pura road.

### **Raw Material Suppliers:**

Raw material is the most important factor in the growth of this industry and without proper raw materials supply these units cannot keep up with the production. There are about 4 to 5 companies supplying raw material to ceramics industry in Gujranwala. These suppliers procure clay from mine owners<sup>1</sup> and import barium carbonate and china clay from china and zirconium from England, USA, Italy, and Malaysia for fulfilling the raw material requirement of Ceramics Sanitary ware industry. However raw material supply is irregular and manufacturers have to face late delivery of raw material or shortage of raw material.



## **Raw Materials Availability**

Raw material used in sanitary ware manufacturing is quite cheap. Raw materials are used in huge volumes and this makes their supply-chain an important factor. Majority of the raw materials are imported and are supplied by the few raw material suppliers based in the local market.

- Zirconium is one of the costly raw materials used in glazing of ceramics sanitary ware products and is imported from England, U.S.A., Italy and Malaysia. Zirconium from England and U.S.A is considered of High Quality and also more costly than zirconium from Italy and Malaysia.
- K.D 7 clay, K.D. 10 clay and Mianwali clay (Poocha) are available in Mianwali. Only Mianwali residents can lease these mines. These clays are pure mineral and their quality varies that cause a bad impact on product quality.
- Mines of Sindhi clay are in Sindh area.
- Berfab clay is available from Swat.

Distributors/dealers are importing China clay, Ball clay, Zinc Oxide and Barium Carbonate from China, U.S.A and England.

Some stone are available in country that includes

- Feldspar found abundantly from Mansehra and its quality is acceptable.
- Quartz is found from Peshawar and Swat.

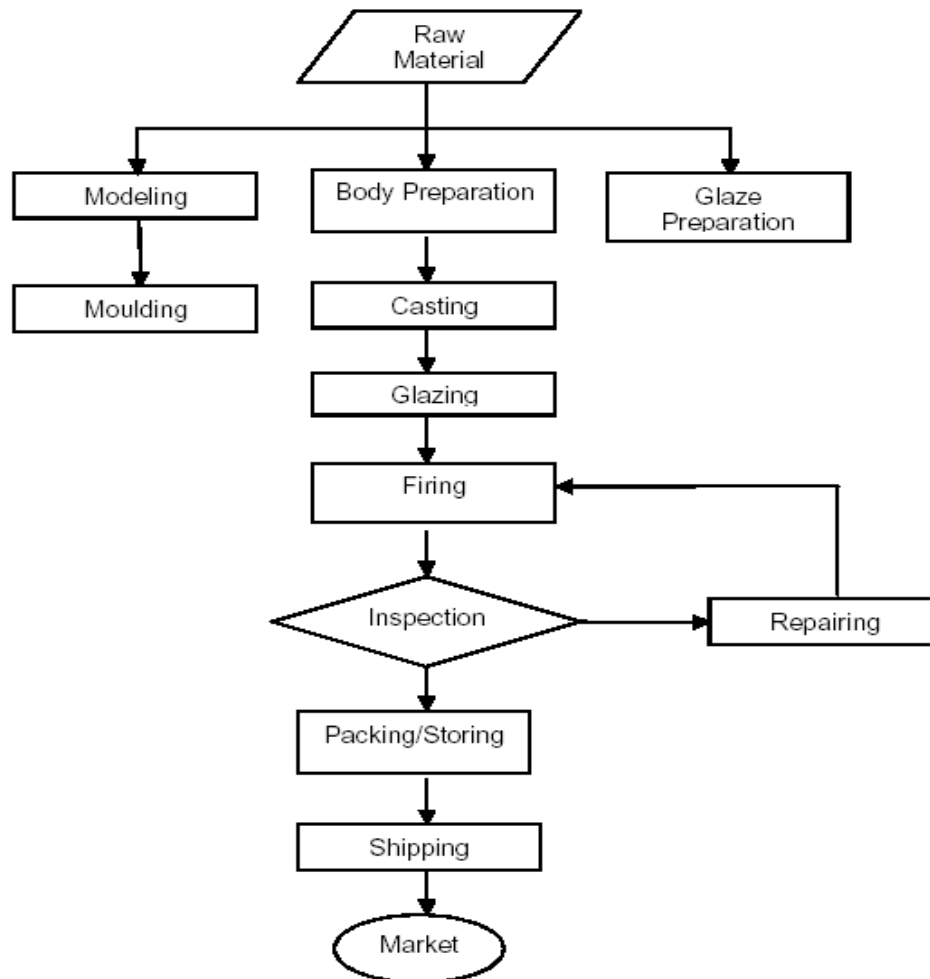
## **Manufacturing:**

The manufacturing flow chart is given below. An important thing to note is the lack of modern manufacturing techniques in the ceramic sanitary ware. Government has taken certain initiatives to upgrade the technology and develop skilled ma power in this sector in this sector but a lot depends upon the prospective entrepreneur as well. Our research study indicates that most of the owners are complacent and don't want to change. The reason can be attributed to the fact that what ever they are manufacturing is sold out





either on cash or credit and therefore they don't bother about improving quality or upgrading technology because of the risk factors, which includes uncertainty about financial costs and paybacks and their compatibility with locally available raw material. Demand exceeds supply but the actual quantity of demand is still vague.



### QUALITY ASSURANCE:

Quality assurance is a problem faced by the industry and the most common reason attributed is absence of clay processing plants that remove impurities from the raw material. The manufacturers don't have enough resources to establish individual processing plants because the cost will increase significantly. The second aspect of quality assurance is an internal factor and depends upon the way manufacturing process



is handled and quality is maintained. If manufacturers cover only the internal factor effecting quality then they can not only improve quality but also reduce wastage of products.

### **Machinery Suppliers:**

Spray booth, Glaze Containers, drums and kilns are the machinery used for ceramics sanitary ware factory. Kilns are designed by ceramics engineers and manufactured by the kiln makers. There are about 12 kiln makers, which are experts and fulfilling the need of industry. Glaze containers, spray both and drums are prepared by the engineering sector of the Gujranwala. Other machinery used is following.

- Ball mill (for blending of clay)
- Ceramic kiln
- Multiple glazer

This sector is using locally manufactured machinery (LMM) that is beneficial in terms of its ability to save foreign exchange.

### **Technology Status:**

The technology employed by this cluster is traditional and old. In sanitary ware products SUI Gas cost makes up of 40% of the total manufacturing cost, due to the inappropriate design of Kiln and kiln furniture. As per one of the survey conducted on energy audit of kiln, industry average is 4 BTU of heat per kg as compared to international standard of 1.6 BTU per kg. Following are the common flaws in locally manufactured kiln:

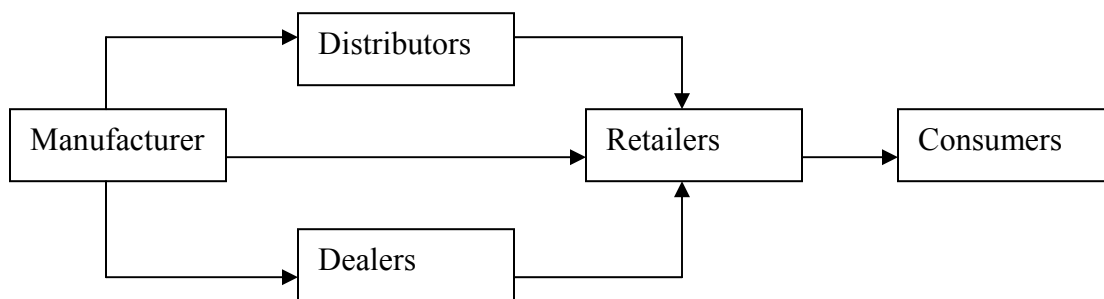
- i- Excessive heat leakage from the walls and ceilings
- iii- Incomplete combustion due to flaws in burner design.
- iv- Presence of excess/low level of air than required from optimum combustion of the kiln.

By modifying kiln in order to achieve more gas efficiency the cost and consumption of Gas can be reduced.



## Marketing & Sales

Manufacturers have developed contacts with the distributors in all over the country and place their product on the market through these outlets. There is neither any proper marketing department in most of the factories nor any product development department and the product designs are copied. Major distributors of Ceramics sanitary ware products are in three cities Karachi, Lahore and Rawalpindi. In Balochistan area, dealers are only operating in Quetta. The distribution channel moves goods from producer to consumer.



## Financing:

Almost all the registered commercial and industrial development banks of Pakistan have their branches in the cluster and are providing finances at competitive rates. But most of stakeholders depend upon their own financial equity based resources. These entrepreneurs are reluctant to go to the financial institutions due to unawareness, ineffective information flow and paper work.

## Human Resources:

Human resource side of the industry is facing acute shortage. Skills are traditionally inherited and there are no center for the skill development and training. Most of the labor is semi skilled and are trained on job. There is no specialized marketing or accounts department. They facilitate their sales only on the basis of personal contacts and no proper accounts are maintained therefore certain problems related to tax return, monitoring and evaluation are faced. The owner usually deals with management issues and marketing related activities. Only primary or intermediate level employees are



handling accounts. Glazing supervisor, Body supervisor, Kiln supervisor, Designing or molding in-charge are considered skilled man power that are ceramics diploma holders or experienced persons and currently the industry is facing shortage of this human capital.

**Purpose of the study:**

The purpose of this study is to analyze the ceramic cluster from a marketing perspective. Previous studies on this sector were based either on the technological shortfall in the cluster or boosting exports through attracting investment in this sector by highlighting demand and inflating profits of this sector with out taking marketing ground realities into consideration. Cluster may prove to be beneficial for the region, country or for the players but it may prove to be very fatal and turn into red-ocean if the players of this cluster start competing with each other rather then the player of another region or cluster. The previous studies were not only ignoring this fact but also unknowingly drawing the players deeper into the red-ocean. This study is an effort to understand the current stage of the industry lifecycle, sources of contention and areas that can help the players to stand out of the crowd. This study also suggests some generic strategies.

**Research Methodology:**

Our research methodology is based on primary research except for the data about manufacturing cycle that was already available and beyond the scope of research. A questionnaire was designed comprising of 16 question fields to be filled in by the respondent. These questionnaires were sent through mail on the addresses available but the response rate was very low despite two reminders through phone calls. In view of the low response rate i.e. 8% it was decided to fill the questionnaire in person by going at the premises of the respondents but due to shortage of resources and time constraints the research model was changed from “Every Unit Survey” to sample based research. In this regard one visit was conducted and 26 factories were visited out of the sample size of 43. The remaining data was collected from the ceramic association.

**Questionnaire:**

The questionnaire comprises of 16 questions and constitutes five pages. The surveyor himself filled in the data by asking questions and filing the responses. A copy of questionnaire is attached in appendix A.



### Sample Methodology and Sample Size:

Judgment based sampling methodology is applied in this research because 50% of the sample size covers the maximum information and contains enough data that can be generalized.

Total Sample Size	43
No. Of Ceramic Sanitary Units	30
No. OF Refractories	02
No. Of Pottery Units	11

Whereas the actual No. Of Units in ceramic sector are as follows

Total Units	79
No. Of Ceramic Sanitary Units	60
No. OF Refractories	08
No. Of Pottery Units	11

### Respondents:

Our respondent is a person who owns or manages a manufacturing unit in ceramic sector or any other person eligible to disclose our desired information on behalf of owner or manager. Our respondents does not include and dealer, retailer or any export agent.



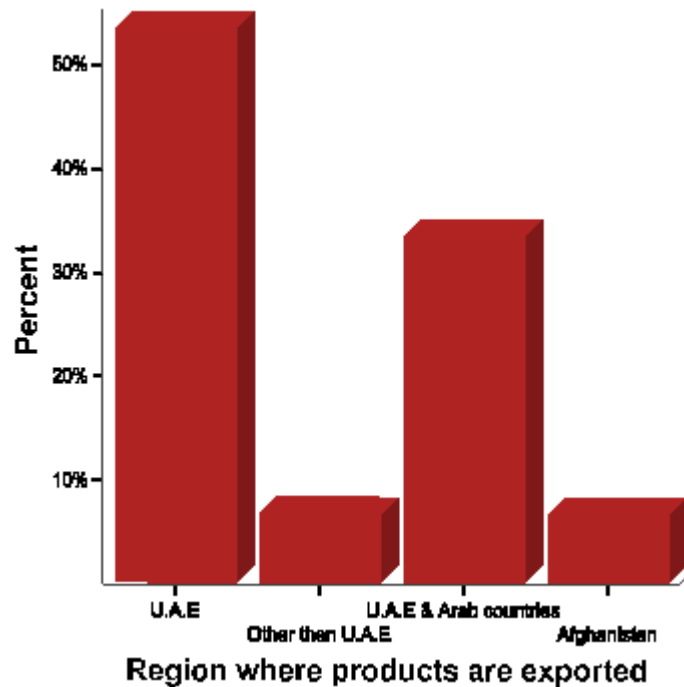
## Research Results

### Current Export Trend:

The results indicate the tendency of the exporters toward Middle East and U.A.E that can be attributed mainly to the presence of local export consultant in these regions or dealers that prefer import from Pakistan and other developing countries because of their cost competitive products. The table below shows that only 35 percent of the respondents are engaged in exports.

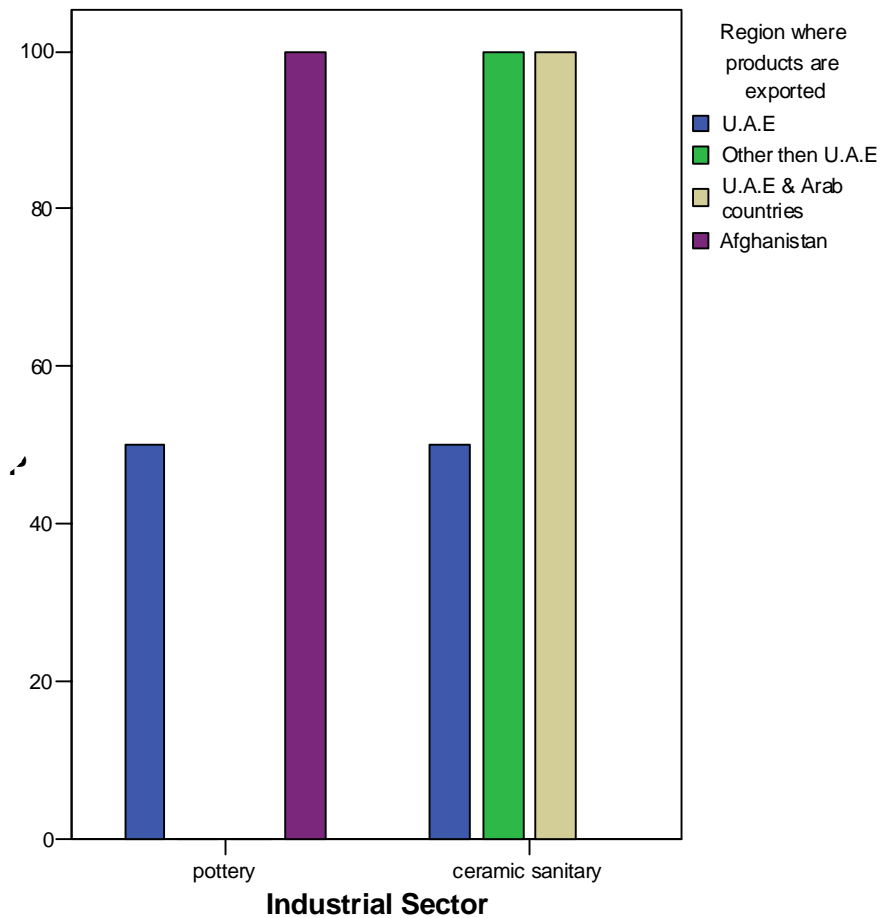
#### **Region where products are exported**

	Percent	Valid Percent	Cumulative Percent
U.A.E	18.6	53.3	53.3
Other then U.A.E	2.3	6.7	60.0
U.A.E & Arab countries	11.6	33.3	93.3
Afghanistan	2.3	6.7	100.0
Total	34.9	100.0	





As per our analysis 90% of the exports from Ceramic sanitary sector are made to U.A.E and Arab Countries while the remaining 10% exports are made to countries other than these regions. Comparatively the Pottery sector make 80% of the exports to U.A.E while the remaining 20% are concentrated to Afghanistan. The reason for not exporting other regions can be attributed to multiple factors, namely huge demand in domestic market, lack of skilled labor to setup new units and complacent attitude of industrialists toward capacity building.





### Region where products are exported \* Industrial Sector Cross tabulation

		Industrial Sector		Total
		Pottery	Ceramic sanitary	
U.A.E	Count	4	4	8
	% Within Region where products are exported	50.0%	50.0%	100.0%
	% Within Industrial Sector	80.0%	40.0%	53.3%
	% Of Total	26.7%	26.7%	53.3%
Other then U.A.E	Count	0	1	1
	% Within Region where products are exported	.0%	100.0%	100.0%
	% Within Industrial Sector	.0%	10.0%	6.7%
	% Of Total	.0%	6.7%	6.7%
U.A.E & Arab countries	Count	0	5	5
	% Within Region where products are exported	.0%	100.0%	100.0%
	% Within Industrial Sector	.0%	50.0%	33.3%
	% Of Total	.0%	33.3%	33.3%
Afghanistan	Count	1	0	1
	% Within Region where products are exported	100.0%	.0%	100.0%
	% Within Industrial Sector	20.0%	.0%	6.7%
	% Of Total	6.7%	.0%	6.7%
Total	Count	5	10	15
	% Within Region where products are exported	33.3%	66.7%	100.0%
	% Within Industrial Sector	100.0%	100.0%	100.0%
	% Of Total	33.3%	66.7%	100.0%



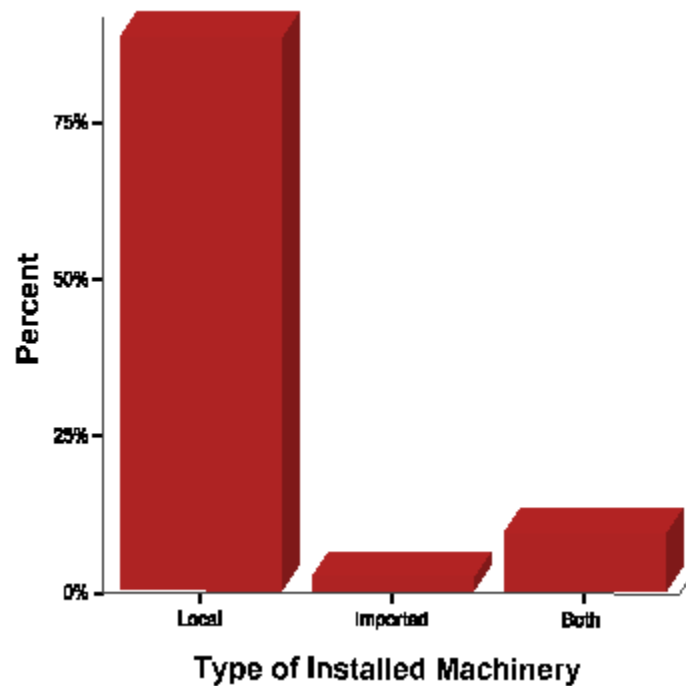


### Installed Machinery:

Almost 90% of the firms are using local machinery with extremely low efficiency while only a small percentage, 2% uses imported machinery but it is also not exclusive while 9% uses both local and imported machinery. The reason can be attributed to the low cost of local and traditional machinery and lack of technological diffusion or technology transfer.

#### Type of Installed Machinery

	Percent	Valid Percent	Cumulative Percent
Local	88.4	88.4	88.4
Imported	2.3	2.3	90.7
Both	9.3	9.3	100.0
Total	100.0	100.0	



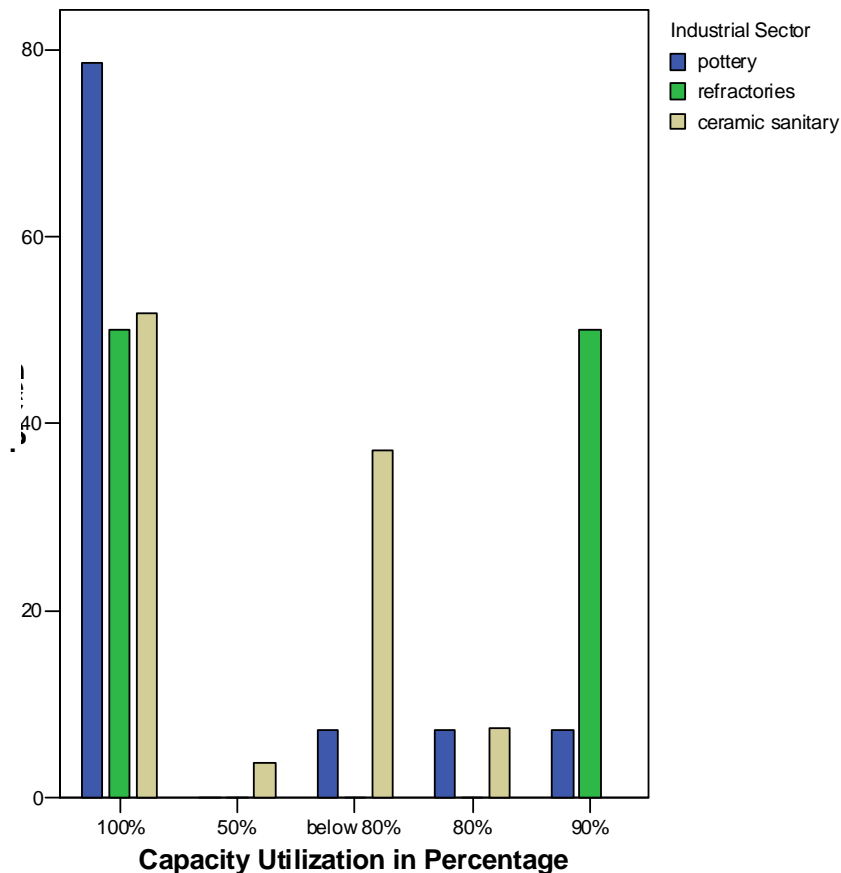


**Capacity Utilization:**

Overall 61% of the ceramic industry is utilizing 100% of installed capacity and the percentage of units utilizing 80%-100% of the capacity is 37%. These figures collectively show the efficiency level of the ceramic sector that includes pottery and refractories as well in our research. The ceramic sector stands at a high utilization level where 96% of the units are utilizing capacity ranging 80% to 100%.

The average number of units produced by a unit is 500 pieces per day and if we multiply the average figure with the total No. Of factories then the combined capacity of Gujranwala’s ceramic sanitary industry is producing 30000 thousand pieces daily and the annual figure turns out to be 10800000 pieces.

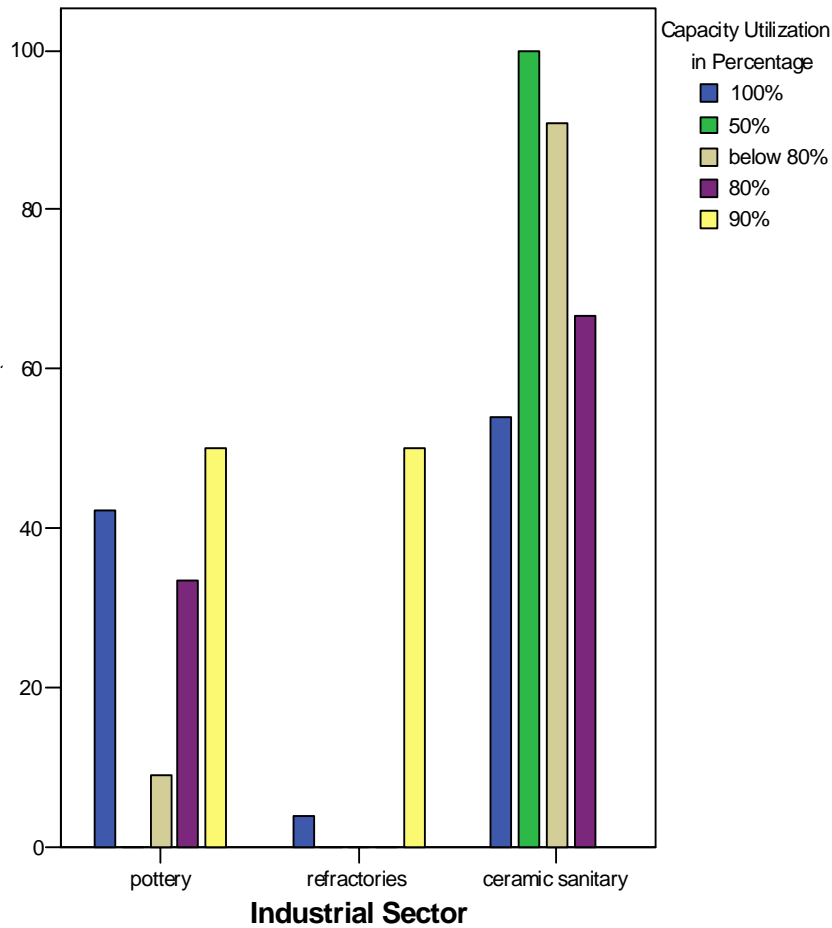
Pottery industry is also running at a higher efficiency level and 78% units are running at 100% capacity utilization level and the remaining 30% of pottery unit account for the efficiency level of 80%-100%. See total capacity in appendix-B.





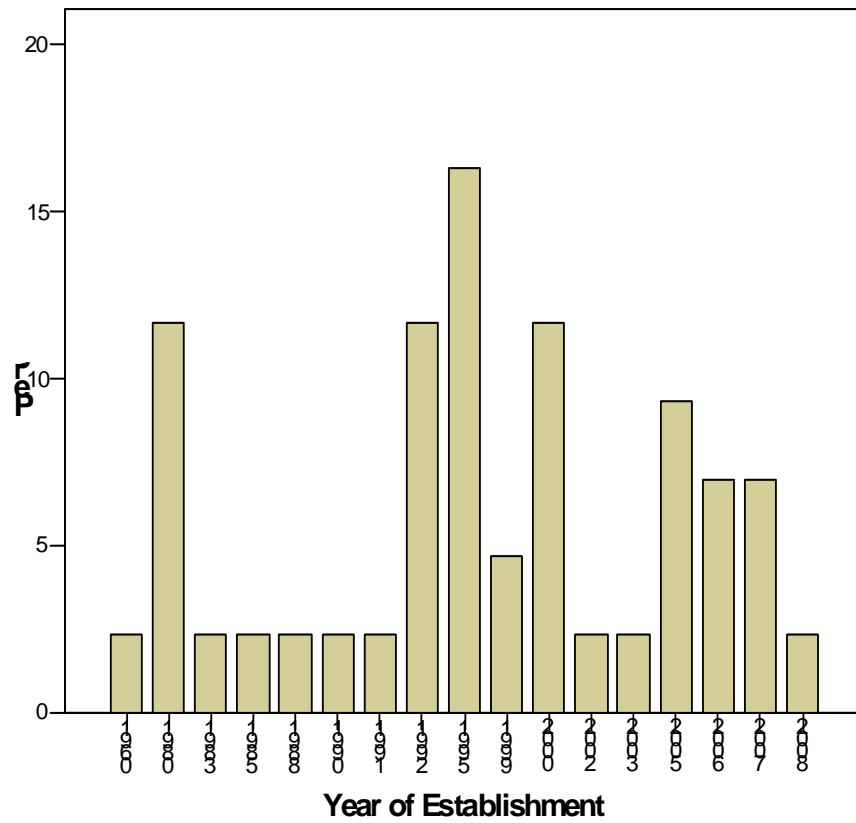
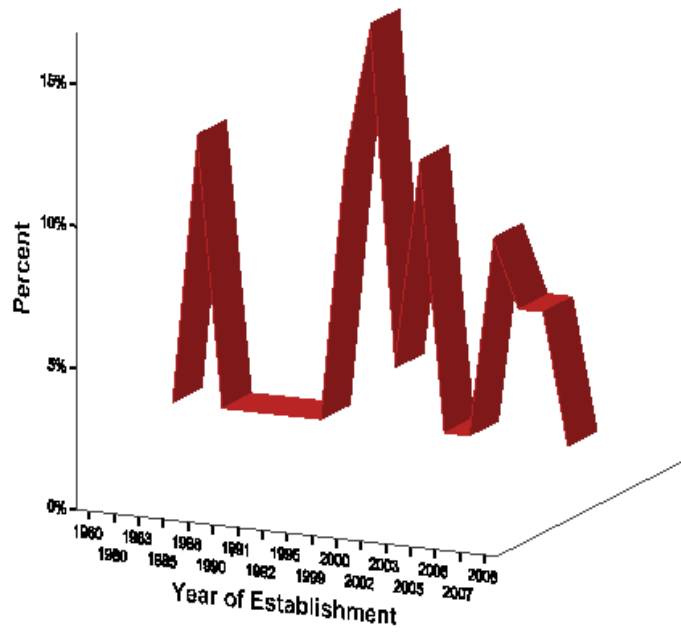
### Industrial Sector \* Capacity Utilization in Percentage Cross tabulation

		Capacity Utilization in Percentage					Total
		100%	50%	Below 80%	80%	90%	
Pottery	Count	11	0	1	1	1	14
	% Within Industrial Sector	78.6%	.0%	7.1%	7.1%	7.1%	100.0 %
	% Within Capacity Utilization in Percentage	42.3%	.0%	9.1%	33.3 %	50.0%	32.6%
	% Of Total	25.6%	.0%	2.3%	2.3%	2.3%	32.6%
	Count	1	0	0	0	1	2
Refractories	% Within Industrial Sector	50.0%	.0%	.0%	.0%	50.0%	100.0 %
	% Within Capacity Utilization in Percentage	3.8%	.0%	.0%	.0%	50.0%	4.7%
	% Of Total	2.3%	.0%	.0%	.0%	2.3%	4.7%
	Count	14	1	10	2	0	27
Ceramic sanitary	% Within Industrial Sector	51.9%	3.7%	37.0%	7.4%	.0%	100.0 %
	% Within Capacity Utilization in Percentage	53.8%	100. 0%	90.9%	66.7 %	.0%	62.8%
	% Of Total	32.6%	2.3%	23.3%	4.7%	.0%	62.8%
Total	Count	26	1	11	3	2	43
	% Within Industrial Sector	60.5%	2.3%	25.6%	7.0%	4.7%	100.0 %
	% Within Capacity Utilization in Percentage	100.0 %	100. 0%	100.0%	100. 0%	100.0 %	100.0 %
	% Of Total	60.5%	2.3%	25.6%	7.0%	4.7%	100.0 %



**Establishment of Units:**

Certain peaks were observed while analyzing the number of units established in previous years. In 1980 there were only 12% of the current units but another peak is observed during 1992 and 1995 where 28% of the total no. Of units were established. Number of new units establishing every year is decreasing as a result of acute shortage of skilled labor. There is a need to observe the factors that played an important role in the formation of peaks in the establishment. The table and graph below illustrate the situation.





	Valid Percent	Cumulative Percent
1960	2.3	2.3
1980	11.6	14.0
1983	2.3	16.3
1985	2.3	18.6
1988	2.3	20.9
1990	2.3	23.3
1991	2.3	25.6
1992	11.6	37.2
1995	16.3	53.5
1999	4.7	58.1
2000	11.6	69.8
2002	2.3	72.1
2003	2.3	74.4
2005	9.3	83.7
2006	7.0	90.7
2007	7.0	97.7
2008	2.3	100.0
Total	100.0	

### Legal status of organization

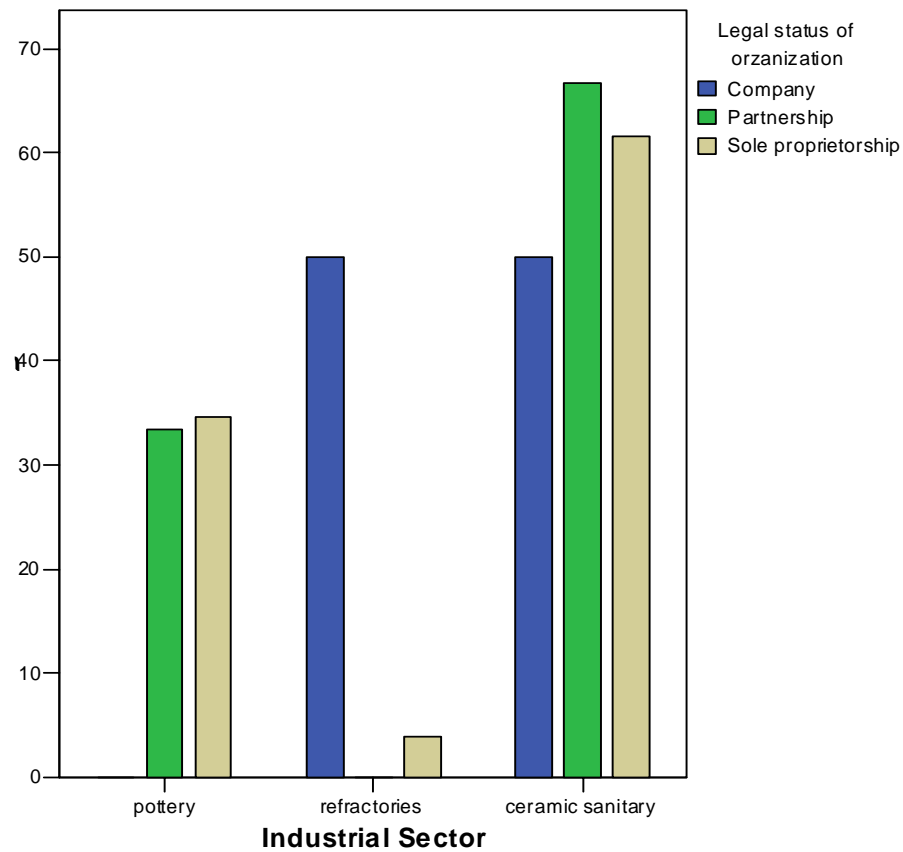
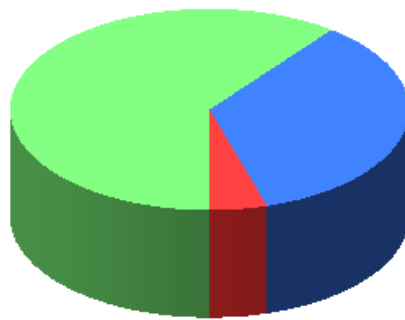
60% of industries are registered as sole proprietors; remaining 35% are working on Partnership basis while only 4 manufacturing units are registered as companies. If we look at the results sector wise in Exhibit B we find that in Pottery sector no unit is registered as company but 36% of the units are registered as Partnership firms and remaining 64% are working as sole proprietors. In Refractories sector 50% units are registered as Pvt. Ltd. Companies while the remaining 50% are working as sole proprietors. If we look at the ceramics sanitary sector, only 4% units are companies while 37% are working on Partnership basis and the remaining 59% established and operational as sole proprietors.



	Valid Percent	Cumulative Percent
Company	4.7	4.7
Partnership	34.9	39.5
Sole proprietorship	60.5	100.0
Total	100.0	

**Legal status of organization**  
 ■ Company  
 ■ Partnership  
 ■ Sole proprietorship

Pies show percents





### Cross Tabulation: Legal status vs. Industrial Sector

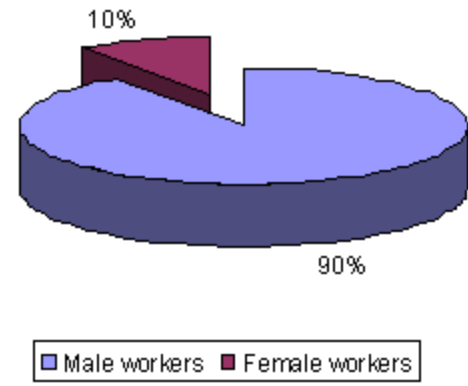
		Industrial Sector			Total
		Pottery	Refractories	Ceramic sanitary	
Company	Count	0	1	1	2
	% Within Legal status of organization	.0%	50.0%	50.0%	100.0%
	% Within Industrial Sector	.0%	50.0%	3.7%	4.7%
	% Of Total	.0%	2.3%	2.3%	4.7%
Partnership	Count	5	0	10	15
	% Within Legal status of organization	33.3%	.0%	66.7%	100.0%
	% Within Industrial Sector	35.7%	.0%	37.0%	34.9%
	% Of Total	11.6%	.0%	23.3%	34.9%
Sole proprietorship	Count	9	1	16	26
	% Within Legal status of organization	34.6%	3.8%	61.5%	100.0%
	% Within Industrial Sector	64.3%	50.0%	59.3%	60.5%
	% Of Total	20.9%	2.3%	37.2%	60.5%
Total	Count	14	2	27	43
	% Within Legal status of organization	32.6%	4.7%	62.8%	100.0%
	% Within Industrial Sector	100.0%	100.0%	100.0%	100.0%
	% Of Total	32.6%	4.7%	62.8%	100.0%





### Ratio of Male and Female Workers:

As per the results of survey the ratio male and female workers is 90:10. We visited 40 units where 1424 workers were working and out of them 1287 are males whereas 137 are females. The range of workers in these units is from 5 to 100 per unit.



### Proportion of Direct and Indirect Labor

Direct Labor	12000
Indirect Labor	20000

### Products being manufactured and sold:

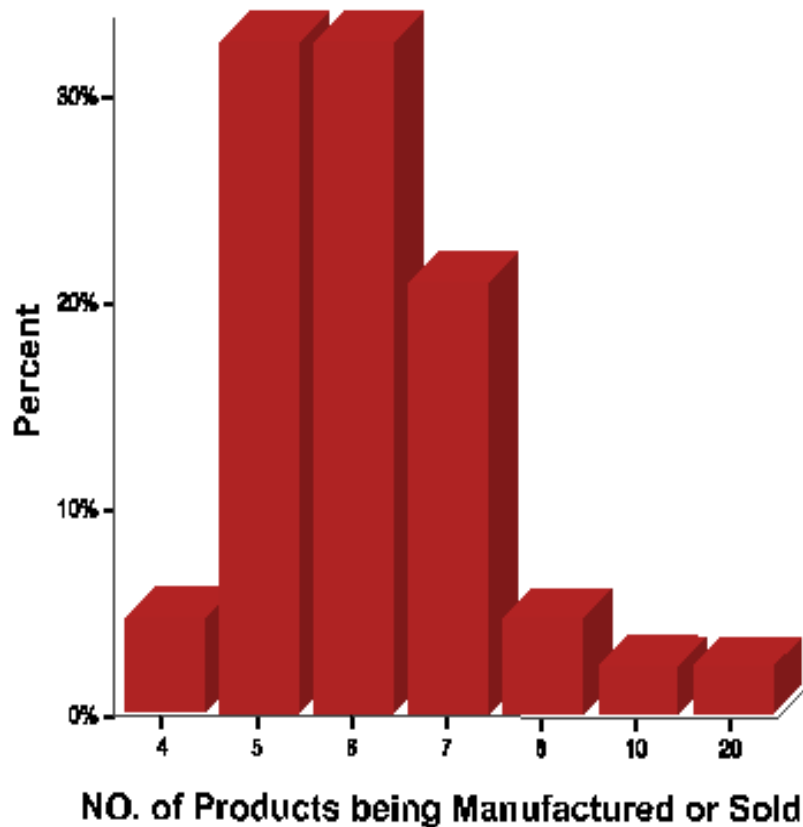
Our analysis shows that 82% of the industrial units have concentrated their production on 7 product categories that are made and sold by every ceramic sanitary manufacturer these products have become commodities and the prices of these 7 product categories are very competitive. These 7 products include following:

1. Commode Tank
2. Wash Basin and wash stand
3. Pedestal
4. P trap



5. Toilet Combination
6. One piece Toilet

Products	Frequency	Percent	Valid Percent	Cumulative Percent
4	2	4.7	4.7	4.7
5	14	32.6	32.6	37.2
6	14	32.6	32.6	69.8
7	9	20.9	20.9	90.7
8	2	4.7	4.7	95.3
10	1	2.3	2.3	97.7
20	1	2.3	2.3	100.0
Total	43	100.0	100.0	



### **Distribution Channel:**

The distribution channel in ceramic industry is composed of dealers and retailers. In ceramic sanitary 78% firms are selling their products to dealers and retailers while 22% are selling only to retailers and don't have any dealer in their distribution channel. In pottery sector 64% firms have a combination of dealers and retailers while 36% comprise only retailers and shopkeepers. In refractories the distribution channel is composed of dealers and contractors and the sales depend upon personal links with contractors. Individual firms that require firebricks in large quantities contact with manufacturers directly.



### Cross Tabulation: Industrial Sector and Distribution

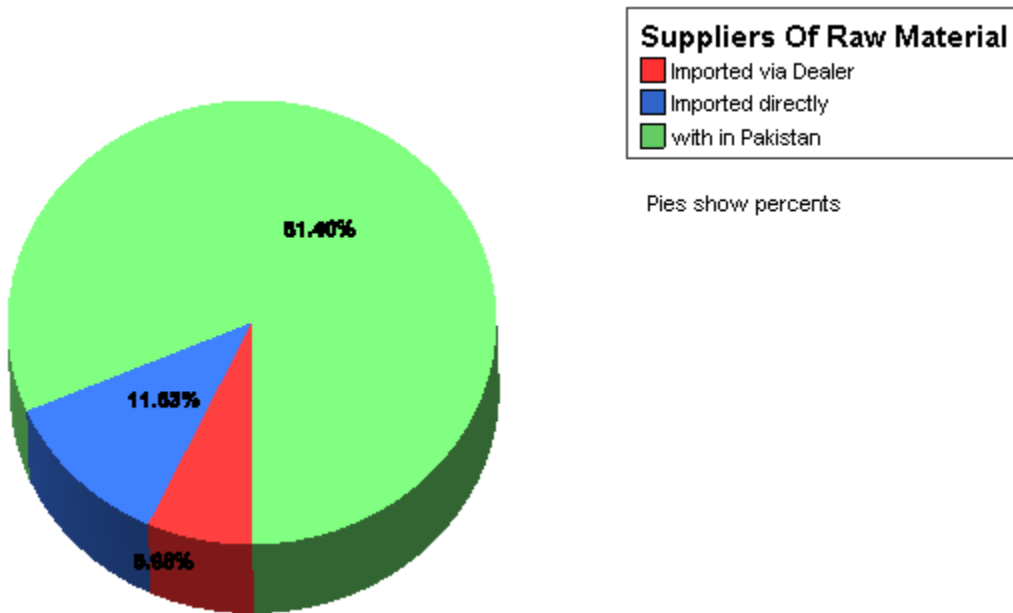
		Industrial Sector			Total
		Pottery	Refractories	Ceramic sanitary	
Dealers and Retailers	Count	9	2	21	32
	% Within Customers	28.1%	6.3%	65.6%	100.0%
	% Within Industrial Sector	64.3%	100.0%	77.8%	74.4%
	% Of Total	20.9%	4.7%	48.8%	74.4%
Retailers	Count	5	0	6	11
	% Within Customers	45.5%	.0%	54.5%	100.0%
	% Within Industrial Sector	35.7%	.0%	22.2%	25.6%
	% Of Total	11.6%	.0%	14.0%	25.6%
Total	Count	14	2	27	43
	% Within Customers	32.6%	4.7%	62.8%	100.0%
	% Within Industrial Sector	100.0%	100.0%	100.0%	100.0%
	% Of Total	32.6%	4.7%	62.8%	100.0%



**Suppliers of Raw Material:**

Our analysis shows that 81% of the manufacturers buy domestic raw material. These come from areas like Mianwali, Attock, Mansehra, Swat, Jackobabad and different areas of southern Punjab and Sindh. 11% manufacturers directly import some of the materials from china whereas where as 7% manufacturers buy imported raw material from dealers.

		Frequenc y	Percent	Valid Percent	Cumulative Percent
Valid	Imported via Dealer	3	7.0	7.0	7.0
	Imported directly	5	11.6	11.6	18.6
	With in Pakistan	35	81.4	81.4	100.0
	Total	43	100.0	100.0	





On the basis of our research study we have done the following SWOT analysis.

### **SWOT Analysis**

The following SWOT analysis captures the key strengths and weaknesses within the Industry, and describes the opportunities and threats being faced.

#### **Strengths**

- High Demand.
- Low cost labor.
- High capacity Utilization
- No. Entry Barriers.
- Competitive Product prices.
- Local Raw Material.
- LMM (Local Manufactured Machinery).

#### **Weaknesses**

- Low Brand Awareness.
- Old Technology.
- No R&D for product development.
- A limited marketing budget.
- Limited Distribution.
- Lack of skilled labor and human resources.

#### **Opportunities**

- Large Export Potential in foreign markets.
- New product development.



- Capacity building.
- Participating in a market niche that is growing at a faster rate than the larger general ceramics market.
- The ability to increase operating efficiencies.

### **Threats**

- Quality control problems with the raw materials that affect the final product.
- Low price Import from China.
- Large surplus capacity in international market.
- Changing consumer preferences.



External Factor Evaluation (EFE)

Opportunities & Threats	Weights	Rank	Weighted Score
<b>Opportunities:</b>			
Large Export Potential in foreign markets	0.15	2	0.3
New product development.	0.12	2	0.24
Capacity building	0.15	3	0.45
Participation in untapped market	0.05	2	0.1
The ability to increase operating efficiencies	0.1	2	0.2
<b>Threats:</b>			
Quality control problems with the raw materials	0.05	1	0.05
Import from China	0.15	2	0.3
Large surplus capacity in international market	0.15	1	0.15
Changing consumer preferences	0.08	2	0.16
	1		1.96

Internal Factor Evaluation (IFE)

Strengths & Weaknesses	Weights	Rank	Weighted Score
<b>Strengths:</b>			
High Demand	0.1	4	0.4
Low cost labor	0.08	4	0.32
High capacity Utilization	0.05	4	0.2
No. Entry Barriers	0.05	3	0.15
Competitive Product prices	0.08	4	0.32
<b>Weaknesses:</b>			
Low Brand Awareness	0.1	2	0.2
Old Technology	0.1	2	0.2
No R&D for product development	0.15	2	0.3
A limited marketing budget	0.1	2	0.2
Limited Distribution	0.09	3	0.27
Lack of skilled labor and human resources	0.1	2	0.2
	1		2.76





### SPACE Matrix:

<b>Internal Strategic Position</b>	<b>Ratings</b>
<b>Financial Strengths (FS)</b>	
Return on Investment	4
Liquidity	2
Working Capital	5
Cash Flow	4
Risk involved in the business	3
	<b>18</b>

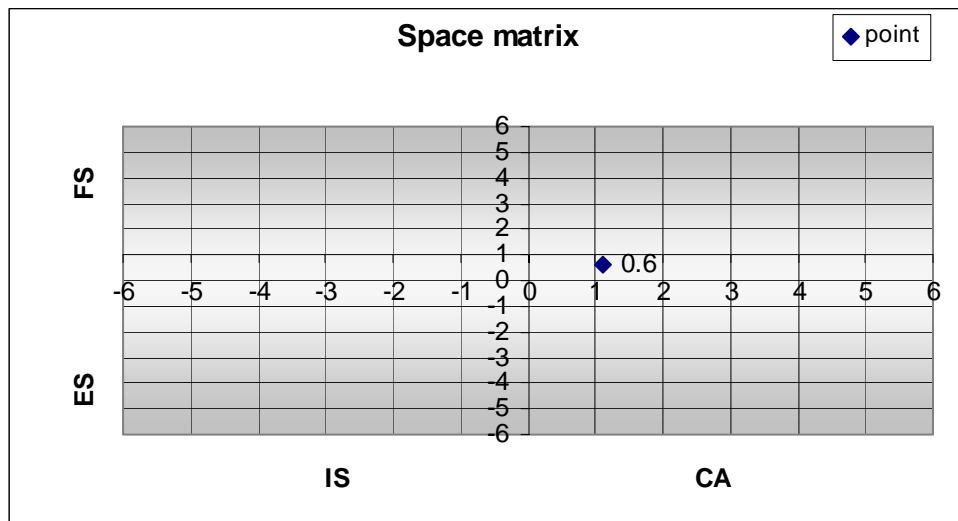
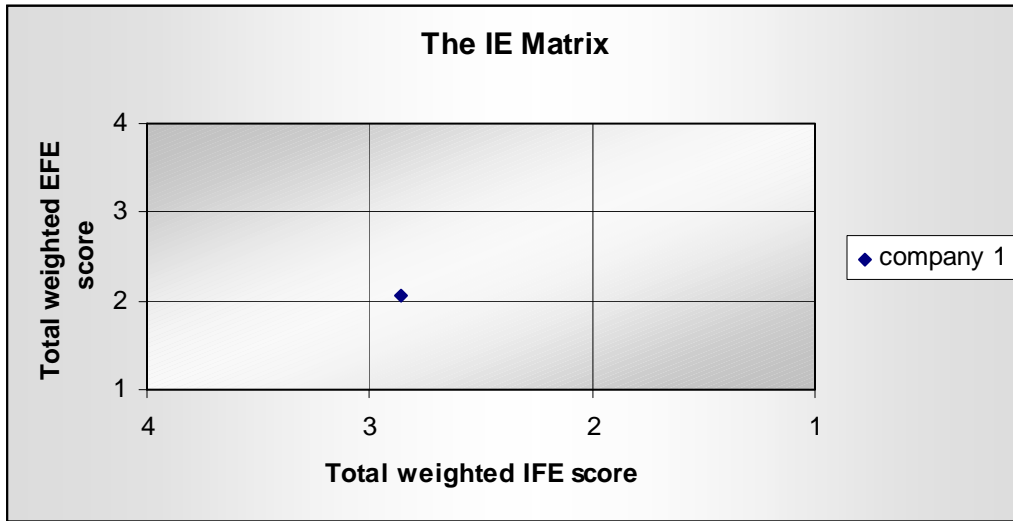
### **Competitive Analysis (CA)**

Market share	-1
Product quality	-3
Product life cycle	-2
Customer loyalty	-4
Competitors capacity utilization	-2
Technological know how	-4
Control over suppliers & distributors	-5
	<b>-21</b>

<b>External Strategic Position</b>	<b>Ratings</b>
<b>Environmental Stability (ES)</b>	
Technological changes	-4
Rate of Inflation	-5
Demand variability	-1
Price range of competing products	-2
Barriers to entry into market	-2
Competitive pressure	-5
Price elasticity of demand	-2
	<b>-21</b>

### **Industry strengths (IS)**

Growth potential	5
Profit potential	4
Financial stability	4
Technological know-how	2
Resources utilization	4
Capital Inventory	4
Ease of entry into market	5
Productivity, capacity utilization	5
	<b>33</b>





<h2 style="margin: 0;">The TOWS Matrix</h2>		<h3 style="margin: 0;">Strengths</h3>	<h3 style="margin: 0;">Weakness</h3>
		High Demand Low cost labor High capacity Utilization No. Entry Barriers Competitive Product prices	Low Brand Awareness Old Technology No R&D for product development A limited marketing budget Limited Distribution Lack of skilled labor and human resources
<h3 style="margin: 0;">Opportunities</h3> Large Export Potential in foreign markets New product development. Capacity building Participation in a growing market The ability to increase operating efficiencies		1.) There is high capacity utilization and no entry barriers so we can tap the export potential by focusing on capacity building. (S2&3 O1&3)	1.) If we rectify the weakness of R&D for product development we can utilize the opportunity #2 2.) If we update the technology we can increase operating efficiency and bottom line can be improved. (W2 & O5)
		<h3 style="margin: 0;">Threats</h3> Quality control problems with the raw materials Import from China Large surplus capacity in international market Changing consumer preferences	1.) we can eradicate the threat of low cost import from china if we capitalize on low labor cost, high capacity utilization and competitive product prices. (S2,3,5 & T2)



QSPM					
		Market Development		Product Development	
Opportunities & Threats	Weights	AS	TAS	AS	TAS
<b>Opportunities:</b>					
Large Export Potential in foreign markets	0.15	4	0.6	2	0.3
New product development.	0.12	2	0.24	4	0.48
Capacity building	0.15	3	0.45	3	0.45
Participation in a untapped market	0.05	4	0.2	2	0.1
The ability to increase operating efficiencies	0.1	3	0.3	3	0.3
			0		0
<b>Threats:</b>					
Quality control problems with the raw materials	0.05	2	0.1	2	0.1
Import from China	0.15	2	0.3	3	0.45
Large surplus capacity in international market	0.15	1	0.15	2	0.3
Changing consumer preferences	0.08	2	0.16	3	0.24
			0		0

Strengths & Weaknesses	Weights	AS	TAS	AS	TAS
<b>Strengths:</b>					
High Demand	0.1	4	0.4	4	0.4
Low cost labor	0.08	3	0.24	3	0.24
High capacity Utilization	0.05	2	0.1	2	0.1
No. Entry Barriers	0.05	4	0.2	3	0.15
Competitive Product prices	0.08	4	0.32	4	0.32
<b>Weaknesses:</b>					
Low Brand Awareness	0.1	2	0.2	3	0.3
Old Technology	0.1	2	0.2	1	0.1
No R&D for product development	0.15	2	0.3	2	0.3
A limited marketing budget	0.1	2	0.2	1	0.1
Limited Distribution	0.09	4	0.36	3	0.27
Lack of skilled labor and human resources	0.1	2	0.2	2	0.2
			0		0
	1		5.22		5.20

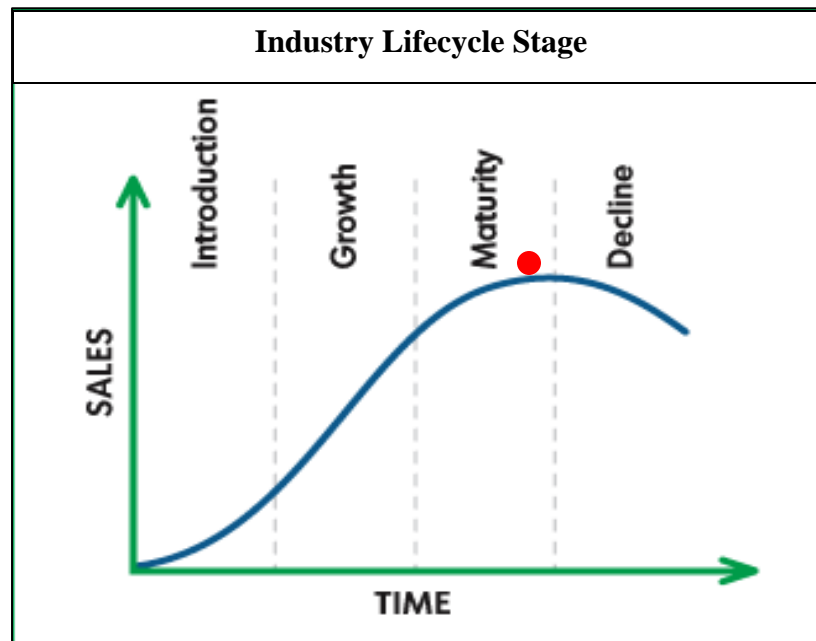


The EFE score of 1.96 indicates that the industry is not equipped to respond to the challenges of the external environment i.e. the opportunities and threats. The average score should be not less than 2.50 for a company that is performing well with respect to external environmental factors.

On the other hand the IFE score of 2.76 depicts that the industry is slightly above average with respect to utilizing its strengths and covering its weaknesses. Although there are areas that need improvement but with respect to the external position of the industry the internal position is more focused by the industry.

The IE Matrix results indicate that the industry falls in the 5<sup>th</sup> quadrant that constitutes the position indicating industry to hold and maintain their business. Such business units will beat their profit targets easily; their management has an easy job and is often praised anyhow.

The current industry is on the maturity stage and is characterized by a saturated market, large number of competitors, there's a well-established customer base, market share is stable, and energy is being put toward differentiating from competitors.





The current situation as appears from the above graph indicates that the market is mature and the competition is high and in order to avoid competition from getting worse the industry has to adopt the strategy of either market development or product development.

Strategic Position & Action Evaluation (SPACE) Matrix is another management tool used to help analyze this industry. The SPACE Matrix is broken down into four quadrants as being aggressive, conservative, defensive, and competitive. Additionally, the SPACE Matrix analysis functions upon two internal strategic dimensions that are financial strength (FS) and competitive advantage (CA). Besides, the SPACE Matrix methodology also studies two business' external strategic dimensions such as environmental stability (ES) and industry strength (IS). The CA (values from -1 to -6) and IS (values from +1 to +6) are representing by the X-axis of the Cartesian graph whereas the FS (values from +1 to +6) and ES (values from -1 to -6) are representing by Y-axis. After drawing these SPACE matrix graph, the overall strategic positioning of a company can be determined.

According to the graph above, we noticed that ceramic sanitary industry falls into aggressive quadrant of the SPACE Matrix. It is located at the coordinates of 1.125 for x-component and a y –component of 0.06. It shows that ceramic sanitary has a strong competitive position in the market with rapid growth. It also indicates that ceramic sanitary should adopt an aggressive strategy. It needs to use its internal strengths to develop a market development strategy. Other possible strategies include product development, integration with other ceramic units to achieve economies of scale and eradicate local competition so that they can focus on market development.



### **QSPM Score:**

In order to evaluate the strategy best suited for the industry we used quantitative strategy profiling matrix. The two narrowed down strategies we suggested for the industry are

1. Market Development.
2. Product Development.

We evaluated both of these strategies by assigning them an attractiveness score on the basis of their ability to help utilize existing strengths, capitalize on opportunities and deter the threats that the industry is facing. The total attractiveness score for market development and product development is close i.e. 5.22 & 5.20 respectively but we suggest and prefer the market development strategy because it is more inline with the current resources of the company and will require less investment in terms of technological up gradation and investment in assets require for product development. Although product development is also a lucrative strategy in long run and can provide a company a critical competitive advantage in terms of its ability for new product development. Market development can provide more sales and strong foothold for future in new markets.

The individual industrial units can adopt these suggested strategies by keeping in view their own resources and capabilities. The industrial units having good marketing capabilities and can explore new frontiers should definitely go for market development with existing product lines. The industrial units that have the ability to invest further into assets and operations should go for product development because this will provide them access to untapped segments in the existing markets, give them an early mover advantage and will provide a strong base for future growth.

**Suggestions and Recommendations:**

- Gujranwala ceramic sanitary 's high reputation helps in attracting customers.
- The industry should develop new markets, currently they are targeting Middle East and Eastern Europe but other overseas markets are yet to be explored e.g. Africa.
- They should expand their products.
- Eliminate inefficiencies and improve quality.
- Seek Integration Opportunities such as merger and acquiring other existing ceramic units in different areas
- Seek new and good management staff to get a better company direction
- Banks should give loans for the installation of new plants at low rates of interests.
- Ministry of industry should give importance to this sector because the largest cluster of ceramic industry is in Gujranwala and not only catering the demand of country but also export the items to different countries and earns valuable foreign exchange.
- Training institutions should be established to give training about state of the art technology and so that new skilled workforce can be produced.
- Brand awareness programs should be started to give awareness to the consumers about quality products. Currently the consumer is unaware of the brands and their quality and relies totally on the suggestions of dealers or shopkeepers who manipulates the buying decision of the consumer in their favor. If any industrial unit launches brand awareness program then it can create a pull from consumers and reduce dependency on the retailer.
- TDAP should arrange expos for sanitary ceramic manufacturers and they should be helped to explore new markets. Currently this sector is not receiving enough attention from TDAP. If provided support from the government on the marketing side, the export will increase manifold from this sector.





- Lack of reliance on banks or financial institutions by this sector the investment required for technology up gradation will be a bottle neck and may jeopardize the technology transfer process. Therefore it is necessary that incentives should be given to industry that will help in rapid technology up gradation. Such incentives may include reduction in the duty of imported machinery for ceramic sanitary ware and financial assistance in the form of soft loans for machinery up gradation and capacity building.
- This sector needs government support especially on the financial side and therefore we request that state bank should take initiative and develop such policies that can help the industry grow and expand. We urge for special soft loans for technology up gradation, new machinery installation, infrastructure development and marketing for the ceramic sanitary ware manufacturers so that they can meet the requirements of changing competitive landscape in foreign markets and export their products successfully.
- Cooperation should be developed between NPO and ceramic industry backed by Ministry of Commerce and Industry so that areas of productivity deficiencies can be identified and consultants should be provided by the NPO so that they can help in identifying the technology requirements of interested industry holders on customized basis.
- Regular Supply of Gas is yet another major issue faced by the industry. Long interruptions especially during winter season not only interrupts production but also affect the product quality of the batch that is in the kiln. So it is urged that the supply of Gas be insured. One suggestion in this regard is that SNGPL provide regular supply as it is providing to Textile and Tiles sector, similar arrangements can be made with ceramic sanitary sector as well.



### **Limitations:**

There were certain limitations in the research.

- Poor response rate of the respondents.
- Reluctance to disclose financial information.
- Some of the owners and managers had no proper idea of installed capacity and they considered their actual production as their installed capacity.
- Although the ceramic sector comprises of 5 categories or segment but due to resource constraint this research cover only ceramic sanitary ware.

### **Assumptions:**

Following assumptions made in this research before deciding the sampling method.

- All the factories are employing similar technology and manufacturing procedures are also same\*.
- It is assumed that all the factories that are not covered in this survey have similar capacity as that of the factories covered.

\*We have not challenged the resource-based view by stating that all firms in this sector are same, they may be same in technology and manufacturing but yet they may differ in human capital, marketing or other business operations.



## Appendix-A

### Organization's Profile

Industry			
Name of organization			
Address			
Contact no.		Fax	
Website		E-mail	
Legal Status	<input type="checkbox"/> Sole proprietorship <input type="checkbox"/> Partnership firm <input type="checkbox"/> Company		
In case of partnership, no. of partners			
Year of Establishment			
Initial Investment (Rs)			
Member of GCCI	Yes		No
Product Mix	1. 2. 3. 4.		5. 6. 7. 8.
Installed capacity in Units			
Capacity Utilization in Units			
Machinery	<input type="checkbox"/> Local <input type="checkbox"/> Imported		



Production per year in units	2002	2003	2004	2005	2006	2007
Sales per Year in % of Production.	2002	2003	2004	2005	2006	2007
Please specify your area of distribution (no. of cities/provinces/countries)*						
Cities		Provinces			Countries	
* Please write their names on page no. 4						
No. Of Employees						
Male						
Female						
Suppliers of Raw Material	<input type="checkbox"/> Local (within GRW) <input type="checkbox"/> Local (from other cities) <input type="checkbox"/> International					
<b><u>End users</u></b>						
<i>Individuals</i>			<i>Firms</i>			
ISO Certified	<input type="checkbox"/> <i>Yes</i> <input type="checkbox"/> <i>No</i>					



### Contact Person

Name			
Status/Designation			
Phone No.		Mobile	
E-mail		Fax	



<b>Serial No.</b>	<b>City</b>	<b>Province</b>	<b>Country</b>
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## Appendix-B

Total production capacity of 27 factories of sanitary ceramics is 16550 units per day whereas the capacity utilization of these units is 13750 units per day. It means that the ceramic sanitary units achieve 83% capacity utilization.

Total capacity of units surveyed	Capacity Utilization of units surveyed	% Of capacity utilization	Per unit capacity/day	Per unit production capacity/day
16550	13750	83%	613	509

As per our analysis every manufacturing unit can produce 613 units per day on average basis whereas 509 units are produced in each manufacturing unit.

On the basis of this data we can calculate the per year production of all the ceramic units in Gujranwala. There are 60 manufacturing units of sanitary ceramics and if we take their average production as 500 pieces per day, it means that 30000 pieces are produced daily and the annual production turns out to be 10.8 million per year (360 days). This gives us a considerable idea of the production of Gujranwala ceramic sanitary sector and since there are very low finished good inventory, it is assumed that all the manufactured pieces are sold which in turn gives the figure of annual demand met by this city.





References:

Cluster profile ceramics (SMEDA) [www.smeda.org.pk](http://www.smeda.org.pk)  
All Pakistan Ceramic Manufacturers Association