

2019

Cluster Profile

Ceramics and Pottery Products, Taxila



Turn Potential Into Profit

Small and Medium Enterprises Development Authority (SMEDA)
Ministry of Industries and Production (MoI&P)
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1 Description of Cluster

1.1 Introduction – Ceramics and Pottery Products Taxila

Taxila dates back to the Gandhara period and contains the ruins of the Gandhāran city of Takṣaśīlā, which was an important ‘Hindu’ and ‘Buddhist’ center. People try to relate the present day stoneware craft to the tradition of sculpture making that existed here in that period, before the advent of Islam. In addition to the ruins of Gandhara civilization and ancient Buddhist / Hindu culture, relics of Mughals gardens and vestiges of historical Grand Trunk Road, which was built by Emperor Sher Shah Suri in 15th ~ 16th centuries, are also found in Taxila region.

Taxila Ceramics & Pottery Products Cluster is located across the Taxila Mountains near famous Taxila Museum. The town is known as Dibyan and the population’s major income comes from manufacturing and selling products of Black Stone and Ceramic Handicrafts. The use of glaze on pottery made from Matti or Fuller’s earth is mainly originated from Mongol artisans work, who combined Chinese glazing technology with Persian decorative arts. This technique travelled south to India with early Muslim potentates in the 14th century. In the start, it was used to make tiles to decorate mosques, tombs and palaces in Central Asia. Later, the Mughals began using them in India to mimic their structures from beyond the mountains in Samarkand.

Kashi work, glazing and hand painting of ceramic products is an important art for which Taxila cluster is famous. Presently, Taxila ceramics and pottery products cluster is comprising of around 150¹ manufacturing units of small and micro / cottage sizes. Predominantly, it is an artisan based cluster. Around 3,000 people are directly or indirectly employed by the cluster, as workers, learning artisans or trade’s. The cluster is primarily catering for the local market needs, especially at Rawalpindi, Islamabad and adjoining regions. However, very few manufacturers have been able to establish sales networks across the country and exporting as well.

1.2 Defining the Products

The product range of the cluster mainly entails a variety of handicraft and decorative items made of pottery, clay and ceramics. Though, the cluster is traditionally famous for manufacturing of different types and sizes of flower vases, handicrafts, gift items, fountains and flower pots made of pottery and clay. However, addition of ceramic based decorative and handicraft items are the latest addition to the traditional products. The ceramics based handicrafts and decorative items are the most modern products of the textile pottery industry and mainly comprises of Ash Trays, Plates, Cups, Trays, Mugs, Flower Vases and Pots and Decorative Handicrafts, Gift Items, etc. Now the manufacturers and artisans are also focusing on the manufacturing of handicrafts and decorative items made of marble and stone, especially, ‘Black Stone’.

¹ Source: Taxila Ceramics and Pottery Products Manufacturers

1.3 Core Cluster Actors

The manufacturers of ceramics and pottery based decorative items and handicrafts are the core cluster actors. According to the estimates provided by industry sources, pottery ceramics & handicrafts cluster is comprised of about 25 to 30 small & medium units and around 30 micro level units which produce raw ceramic pots. These units have workers ranging from 2 to 10 in number depending upon the amount of work.

The cluster is predominantly an artisan based cluster and according to local cluster stakeholders around 400 artisans are involved in the manufacturing of pottery and ceramic products. In majority of the cases, artisans are the core manufacturers and owners of the units. The key industry statistics are as follows:

Table 1: Ceramics Pottery Products Manufacturing Cluster, Taxila

Number of Units	<ul style="list-style-type: none"> • Small and Medium Size: 30 Units • Micro Size: 30 Units <p>Moreover, as per Industry Sources there are also Micro / Cottage Size units operating as home based units and being managed by artisans with other family members.</p>
Employment Generated	<p>About 3,000 people are directly or indirectly associated with the business activities related to ceramics and pottery products in the cluster.</p> <p>The estimated employment generation involving permanent and temporary labor or indirect labor is not available.</p>

Source: Taxila Ceramics and Pottery Products Manufacturers

1.4 Other Cluster Actors

The key cluster support actors who provide support services to core manufacturers mainly comprise of die / mold manufacturers and suppliers and raw material suppliers.

The dies and molds are primarily made from iron, plastic or plaster of paris etc., which are easily available from Peshawar, Rawalpindi and Taxila.

Whereas major raw materials mainly include the following;

- Plaster of Paris
- Feldspar
- Quartz
- China Clay
- Paints / Chemicals
- Glass

All of the stated raw materials are quite easily available locally. The raw material suppliers are mainly located in the city of Taxila, Rawalpindi and adjoining areas of Khyber Pakhtunkhwa.

1.5 Geographical Location

The cluster is predominantly confined in the town of Dibyan, which is about 10 Km from Taxila City.

1.6 Current Cluster Scenario

The overall sale from cluster is very low. Majority of handicrafts and decorative items produced in the cluster are sold from the shops within the cluster. However artisans also sell their products in Lok Virsa, Islamabad during exhibitions. The technology, designing and painting techniques used in the cluster are very conventional and outdated.

The cluster requires major investment for transformation of artisans to adopt new designs, techniques and technology in order to produce the quality products as per the demand of modern lifestyles and living standards.

2 Analysis of Business Operations

2.1 Production Operations

The artisans of the cluster make all kinds of pottery and ceramic handicrafts including flower vases, ash trays, flower pots and decoration pieces. Some of the artisans purchase raw pots from the manufacturers and paint different designs on the raw ceramic pots and sell the finished products at their shops. These units procure pots according to the requirements and samples which are available in the raw shape from local manufacturers. Some of the units have inhouse facilities of designing and carving. Painting is done on traditional lines. While others operate with complete value chain, starting from designing to manufacturing of raw pots and finishing of the products.

Machining process represents 60% of the total cost of the ceramic / pottery products. Majority of the units in cluster have inhouse machining facility and only some of the industry outsources their few processes. After raw material procurement, first process is grinding of stone in ball mill and then mixed with clay to form a slip which is then filtered using filter press. Pug mill is used to mix the material and cup roller machine is used to prepare the products according to the required size and specification. The prepared greenware is put into the Kiln (shuttle or tunnel) for biscuit firing up to the required temperature i.e. 700 centigrade approximately and then is dipped manually into the glazed material for shining and coloring of the wares. Subsequently, glazed items are fired again up to 1100-1200 centigrade in the kiln. Major concern in machining process is unavailability of gas and low productivity and energy inefficiency of the machines owing to old technology.



2.2 Raw Materials

Following are the main raw materials or inputs used in production of pottery and ceramic products. All of the raw materials are easily available in the local market.

Table 2: Major Raw Materials

Material	%age Use	Used in	Availability
Plaster of Paris	80%	All Handicrafts	Local Merchants
Paints / Chemicals	15%	All Handicrafts	Local Merchants
Glass	4%	Decoration Pieces	Local Merchants
Metal	1%	Decoration Pieces	Local Merchants

2.3 Technology Status

There is lack of use of modern manufacturing machines and techniques. Currently, very basic level local made machines are being used in the cluster. Majority of the units in the cluster use conventional manufacturing techniques, so it is becoming difficult for these units to achieve the desired production and quality standards. Furthermore, the cost of energy has major share in total cost of production. There is lack of energy saving and efficient machinery and equipment in the cluster. As majority of the produce is supplied to the local market. There is lack of quality standardization among the manufacturers.

2.4 Marketing & Sales

Taxila Ceramics and Pottery Products Cluster is primarily targeting the local market; around 70% of the handicrafts and decorative items produced in the cluster are sold in the nearby regions including, Khyber Pakhtunkhwa, Azad Kashmir, Attock, Chakwal, Jhelum and Islamabad etc. Whereas rest of the products are distributed to other cities across Pakistan.

Products are predominantly sold to domestic consumers either at manufacturers' own showrooms or at traders' retail shops. The manufacturing concerns have their own showrooms and shops at the main road. The shopkeepers usually sell these products along with other decoration items. Some of the manufacturers / traders are also exporting their products on the basis of personal contacts.

2.5 Financing

The financial products currently available / offered by the Financial Institutions are not geared to specifically cater the requirements of this Cluster. Access to equity and finance is the most malicious constraint for cluster growth and development. Commercial banks apply conservative policies while lending. Also this cluster is very small and needs micro loans, so most of the financial



institutions are not willing to provide loaning for such a small segment. The loaning from micro finance institutions is also not much progressed in the cluster.

2.6 Human Resource Management

The education level of workers / labor working in this cluster is very low, which is a major hindrance in learning and accepting new tools and techniques. The cluster artisans are forced to work on conventional lines. There are no specific vocational training facilities for the training of workers of this cluster. Most of the labor is semi-skilled and is trained on the job.

2.7 SWOT Analysis

Strengths

- Easy availability of cheap labor
- Raw material is easily available.
- The artisans can easily develop the products according to required designs and specifications.
- There is very low ratio of wastages and damages during the entire process of production.
- Working on orders by taking 50 % advance payment.
- Rich cultural and historical nature of the products.
- Close collaboration and good networking among the artisans.
- Location is a competitive strength, as cluster is geographically linked-up with major cities.

Weaknesses

- The industry is unorganized and comprises of artisan based micro enterprises.
- Technological obsolescence and lack of availability of modern technology
- Professional management is not perceptible in the cluster.
- Limited range of products that are mostly traditional and in low quality.
- Prices of raw materials are increasing.
- No proper processing of clay and slow production process.
- Profit margin is very low.
- Lack of proper packing of the products.
- Poor marketing of the products leading to lower demand.
- Poor self-financing capacity to meet orders and no trend of getting loans from formal financial institutions.
- Skilled workforce is declining.
- Limited product innovation
- High power prices



Opportunities

- Adaptation of new technologies, methods and designs can be introduced for large scale production.
- Decoration pieces can be marketed all over the Pakistan which are currently sold in local city markets and visitors to the area.
- Exhibitions and workshops can be arranged for promotion.
- Export potential in Europe, Middle East, Africa and Central Asia.

Threats

- Critical labor shortage of skilled workers
- High cost of inputs and raw materials
- Availability of good quality substitutes in the market from China at lower price.
- Non-existence of research and development.

3 Institutional Setup**3.1 Entrepreneurs' Associations**

There is no formal association of manufacturers or artisans in the cluster. However, few of the manufacturers are registered with All Pakistan Pottery & Ceramics Manufacturers Association (APP&CMA) located in Gujranwala.

Rawalpindi Chamber of Commerce and industry (RCCI)

Address: Chamber House # 39, Civil Lines, Mayo Road, Rawalpindi
 Tel: (+92 51) 5111055
 Web: www.rcci.pk

3.2 Support Institutions**Regional Business Center (RBC) – Small & Medium Enterprises Development Authority (SMEDA)**

Address: Chamber House # 39, Civil Lines, Mayo Road, Rawalpindi
 Tel: (+92 51) 9273019-20
 Web: www.smeda.org.pk
 Email: rbcrawlpindi@gmail.com

Punjab Small Industries Corporation (PSIC)

Address: Regional Office Moti Mahel, Murree Road, Rawalpindi
 Web: www.psic.gop

Trade Development Authority of Pakistan (TDAP)

Address:	Regional Office, 26-D, West Kashmir Plaza, Blue Area Islamabad
Tel:	(+92 51) 9212174, 9207348
Web:	www.tdap.gov.pk

4 Major Issues and Problems

- Majority of the existing manufacturing units need up-gradation in terms of modern designs, technology and processing techniques.
- Technology Up-gradation Financing Scheme for local artisan is needed. Such scheme may offer loan to local artisans at subsidized rates for machinery up-gradation.
- The education level of workers / labor working in this cluster is very low which also creates difficulties in learning and accepting new tools and techniques.
- Cost of energy and continual supply of energy is another issue for the manufacturers that needs to be addressed to remain competitive in the market.

5 Investment Opportunities

The need for following projects as potential investment opportunities in Ceramics and Pottery Cluster Taxila has been identified on the basis of the key strengths of this cluster;

- Plaster of Paris Manufacturing Plant
- Glass Cutting and Designing
- Stoneware Products
- Marble Mosaic unit
- Chemical Porcelain Items
- Heat Resisting Items.
- Crockery Ware
- Ceramic Jars
- Plastic Clay Molds

Moreover, pre-feasibilities on ‘Plaster of Paris Plant’, ‘Plaster of Paris Tiles’ and ‘Ceramic Tiles’ are available on SMEDA website and can be consulted for further information. The said documents can be downloaded from www.smeda.org.pk.

In case of any other relevant inquiry kindly visit SMEDA Regional Business Centre, Rawalpindi.

