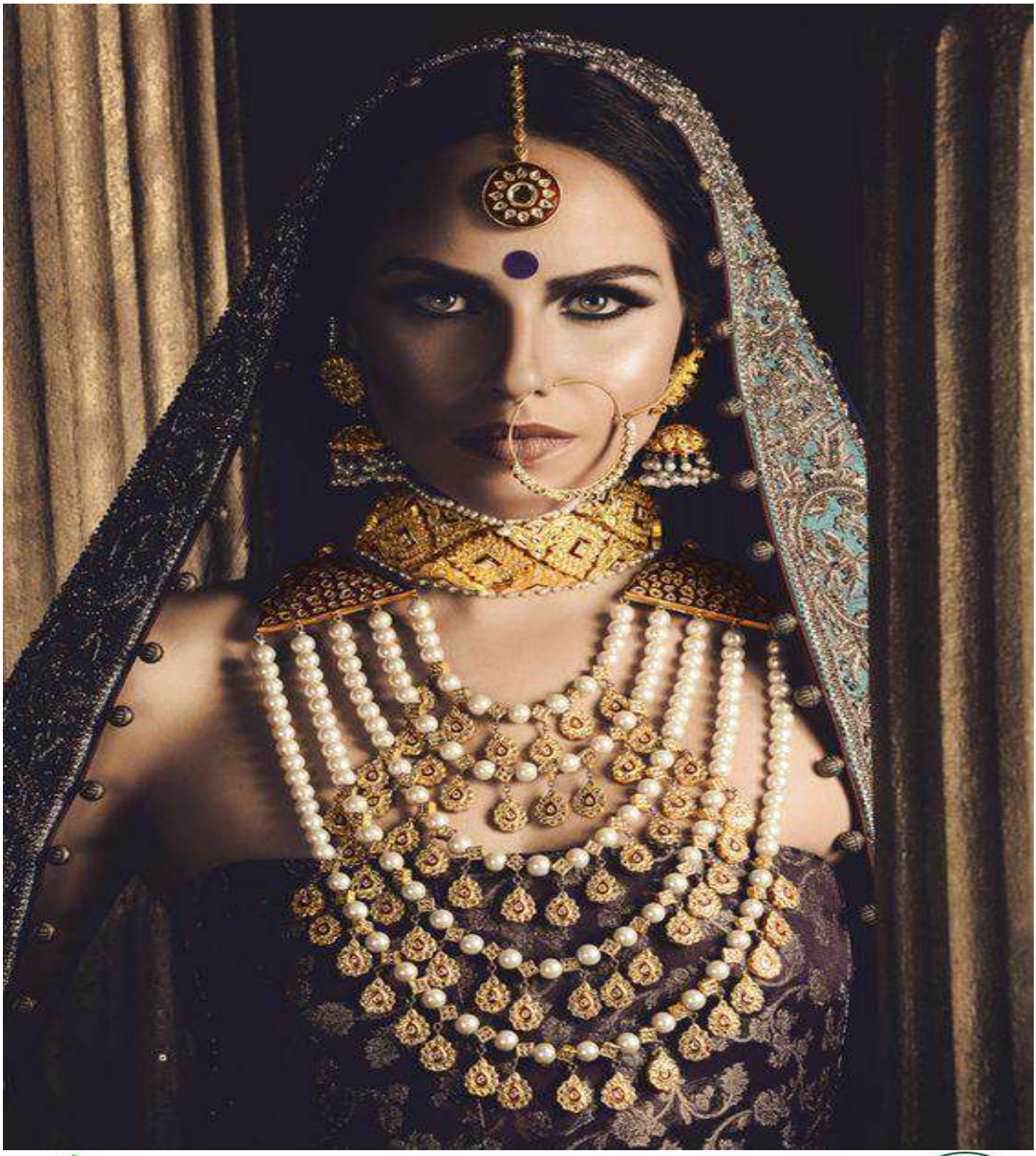
# *Sectoral Analysis of Gems & Jewelry of Pakistan*



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# *List of Acronyms*

*APGMJA----------All Pakistan Gems Merchants & Jewelers Association*

*APCEA----------All Pakistan Commercial Exporters Association of Rough Un Polished Precious & Semi-Precious Stones.*

*AKRSP----------Agha Khan Rural Support Program*

*TDAP----------Trade Development Authority of Pakistan*

*SMEDA----------Small and Medium Enterprise Development Authority*

*PCSIR----------Pakistan Council of Scientific and Industrial Research*

*PSFD----------Pakistan Institute of Fashion and Design*

*GGIP----------Gems and Gemological Institute of Pakistan*

*VR----------Virtual Reality*

*GIA----------Gemological Institute of America*

*CIBJO----------The World Jewelry Confederation*

# *Executive Summary*

Gems and Jewelry sector has a long history in the subcontinent and in the other part of the world. It is a fashioned and traditional wearing commodity. Gems and Jewelry is a symbol of beauty, wealth and even status. It is not only a personal adornment for beauty and display but the affluent class play a vital role in the economies of many countries. Pakistan has huge deposits of variety of gemstones including Emeralds, Ruby, Tourmaline etc. The mines of such deposits are spread over in Northern areas and some parts of Azad Jammu and Kashmir. But the lack of realization of the importance of this sector and the inadequate infrastructure has never allowed the sector to get flourish.

The sector exports are not encouraging for Pakistan from last couple of years. Once the export was $400million in 2014. But since then the exports declined gradually and reached to the worst level of $23.75 million in 2017. This tells the whole story of the sector. In addition to this, the major portion of export of this sector constitutes of “articles of jewelry” which is the raw form. It is an indication of lack of value addition and limited infrastructure in the sector and also coupled with more issues as well.

The report describes the sector in three sections. First section of the report presents the description of the sector and its division into three parts including Gemstones, Jewelry and Waste and Scrap. The second section of the report is based on the identification of the potential products from the sub groups of the sector. In addition to this, the mechanism which is followed for the identification of the potential item is based on demand and supply side. Though, Pakistan has low export value in all three sub groups but still few potential products are identified. In this regard, two potential items are identified from the Gems group which are raw from products, two potential items are identified from the Jewelry group and both are the raw from products and the third product is identified from the waste group of platinum and silver.

Potential products are followed by the potential markets for each item. The potential markets are identified on the basis of their import values. Mostly, there are the major importer of the world are considered as the potential markets. However, the major importing markets use to import the raw from of Gems and Jewelry for value addition and then export to the other markets. Furthermore, the strategy of the leading suppliers to the world is also quoted in the report in order to replicate or learn from it to modernize the Gems and Jewelry sector of Pakistan.

Last section of the report is based on the conclusion and recommendations. It indicates that multiple interventions are required e.g. infrastructure improvement, improved mining techniques, technical interventions, laboratory advancement and branding and marketing of the sector are prerequisite in order to make it more competitive in the world. In addition to this, if same is applied and implemented it can help in increasing the exports of the sector to the world.

# Introduction:

For centuries, the gemstones have captivated the humanity. The beauty and elegance of gemstones have led to an enticing urge of many, especially women to acquire them. The stone which is durable, beautiful, free from fracture and chemical reaction is regarded as gemstone.

The sundry variety of gemstones is found in Pakistan. The Himalayas, Hindukush and Karakoram ranges are the center of gemstones. These ranges are rich with gemstone deposits. It can be said that Northern areas of Pakistan are as much beautiful from inside as from outside.

The history of gemstones begins 5000 years ago during the time of Indus valley civilization and continues till date. After the inception of Pakistan, the gems were found include Emeralds, Ruby, Aquamarines and Corundum. This was reported by Geological Survey of Pakistan in 1951.

Pakistan considered as home to many varieties of minerals, some of which are very prominent such as Ruby, Emerald, Sphere, Tourmaline and Quartz. Pakistan shares a porous and long border of 2430Km with Afghanistan. This has resulted in influx of minerals from Afghanistan to Pakistan. In addition to this, the city of flowers, Peshawar is considered as the major trading hub of Gemstones. Somehow, earlier on Karachi as port city was the trading hub for Gemstones. But later on, Peshawar has fetched this status and become one of the major cities with biggest market of gemstones trading.

The traditional heritage and history of Pakistan is deeply rooted with manufacturing of quality jewelry and gemstones. However, during the Mughal dynasty the artisans of Jewelry and gemstones arose to attain a distinct status in Indo-Pak of that time. The most famous jewelry type that emerged during the Mughal era was include Minakari, Kundan, Polki and Nauratan. Currently, Lahore and Karachi are the main hubs of Jewelry manufacturing. There are more than thirty major cities and nearly three hundred smaller cities and towns where Jewelry manufacturing and trading cater the domestic demand. In villages, there are almost more than 50,000 Jewelers operate as single shop.

Pakistan has gifted with abundant resources of several precious and semi-precious gemstones. At present, mostly found in the northern areas of Pakistan. But it took quite long to establish the Gemstones Corporation of Pakistan (GEMCP) under the administrative control of Ministry of Petroleum & Natural Resources. Later on, the impact of privatization proved positive[1].

[1] *https://smeda.org/index.php?option=com_content&view=article&id=62:gems-a-jewellery-sector&catid=40*

## Gemstones and Jewelry Resources of Pakistan:

Pakistan is consecrated with vast deposits of precious and semi-precious gemstones mostly located in Khyber Pakhtunkhwa (KPK), Gilgit Baltistan (GB), Baluchistan, FATA and Azad Kashmir. The jewelry and gemstones reserves found in Pakistan including Gilgit Baltistan are gold silver-platinum, topaz, rubies, tourmaline, rubies, emeralds, aquamarine, garnet, peridot, pargasite, corundum, fluorite, moonstone, sapphire, spinel, vesuvianite, flint, spinel, quartz, jasper and chert. Apart from this, Azad Jammu and Kashmir are also hub of producing spessartine garnet, bicolor and tricolor tourmalines, ruby, green and morganite[2].

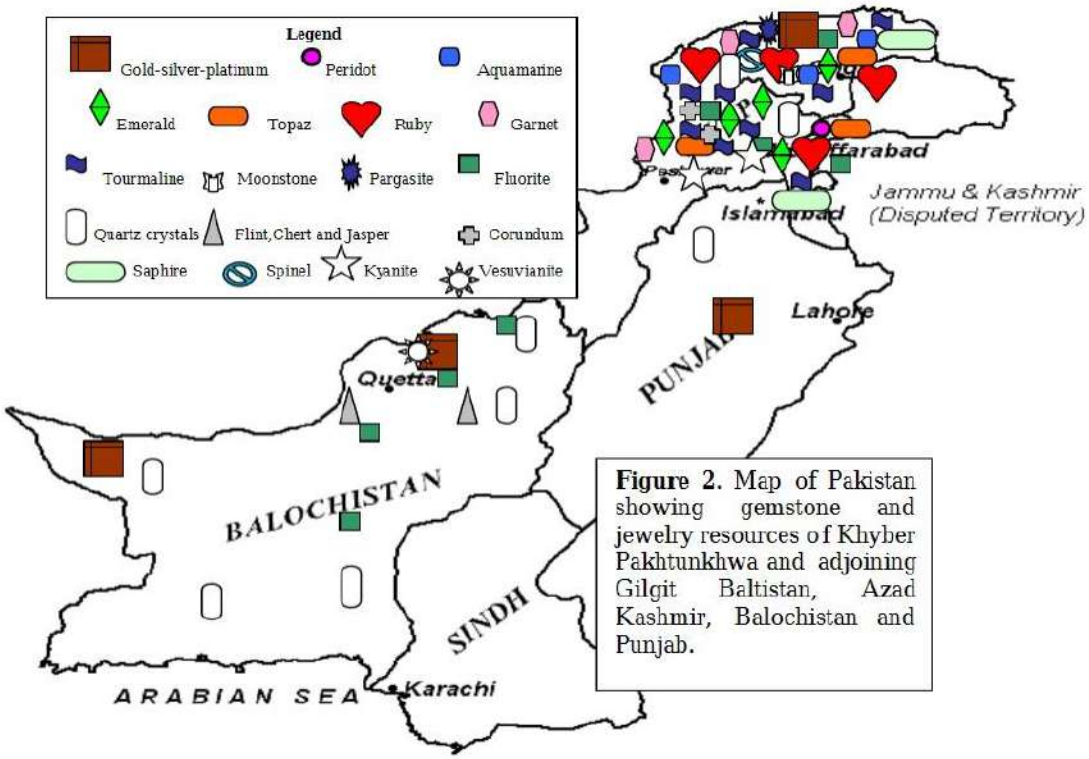



**Figure 2.** Map of Pakistan showing gemstone and jewelry resources of Khyber Pakhtunkhwa and adjoining Gilgit Baltistan, Azad Kashmir, Balochistan and Punjab.

### Gold Silver- Platinum:

Platinum group is linked with mafic and ultramafic rocks, and in placers as well. Tiny amount of gold recovered by panning in the upper Indus and its offshoots.

### Gemstones and Jewelry Reserves (Khyber Pakhtunkhwa & FATA):

The vast deposits of precious and semi-precious stones are found across the Khyber Pakhtunkhwa. The list of dominant precious and semi-precious stones is provided below.

[2] *https://www.researchgate.net/publication/315834639_Gemstone_and_Jewelry_Resources_of_Pakistan*

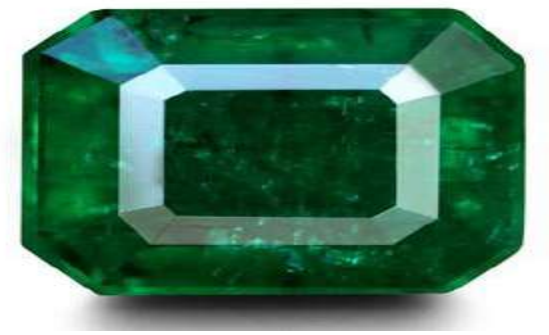
# Gemstones Overview:

**Eminent Kinds of Gemstones Offer by Pakistan To World:**

The kinds of gem Pakistan produces include Emeralds, Topaz, Ruby and Tourmaline. Apart from these, other gems in low quantity include Aquamarine, Peridots.

## Emeralds:

Pakistani emerald is a rare and highly precious variety of the natural emerald gemstone, recognized for its lively deep green hue, distinctive smoothness and unblemished transparency. It is counted amongst the world's most beautiful emerald gemstones. As per Vedic astrology, this gemstone can be worn to gain success in career, financial stability and good health. It is also the birthstone for the people born in the month of May.



The name is of ancient origin. The Latin smaragdus appears, in fact, to have referred to the stone we call emerald, which is now considered as a distinct species. It is basically the green variety of beryl, although not all gem quality green beryl is called emeralds: yellow-green stones are called heliodors; soft blue-green or even pale green specimens (their color due to iron, not chromium, as in emerald) are called aquamarines.

**Appearance**: The typical color is a beautiful, distinctive hue known, in fact, as emerald green and is due to traces of chromium in the crystal structure. But emeralds can be light or dark green, bright green or leaf green. The vitreous luster is not outstanding, and is strongest in medium-light stones with few inclusions. All emerald contains inclusions, although in the best quality stones, these are very faint and not visible to the naked eye. They show up under a 10x, 20x, or 40x lens. The most common shape for gems is the step or trap cut, which is also known as the emerald cut.

They are occasionally given a mixed, oval cut, while antique stones are found with hexagonal, step cuts, cabochon cuts, or pear shapes with a hole in them, often used as pendants.

**Distinctive features**: the typical emerald color is virtually unmistakable. It is only equaled by some very rare specimens of jadeite jade, which, however, is less transparent and has different physical properties. To the initiated, the inclusions in emerald can be highly distinctive: a bubble of gas in a liquid (like a spirit-level), within spindle-shaped or, more rarely, truncated prismatic cavities; birefringent, circular plates of mica; multifaceted pyrite crystals or calcite rhombohedra. However, a microscope is almost always needed to recognize them. Although not the typical emerald color, some green tourmalines may look similar, but they can be distinguished either by‘ their marked pleochroism, or by the fact that tourmalines which are given an emerald

cut display alternating, longitudinal lines of lighter or darker color, when viewed through the table facet.‘ Olivine may also be a verdant green color vaguely similar to that of some atypical emeralds; but

the powerful birefringence of olivine is detectable with a simple lens, a double image of the opposite facet edges being clearly visible in certain directions through the table facet. In any case, the density of either tourmaline or olivine immediately distinguishes the stone from emerald.

Occurrence The biggest and most beautiful emeralds come from the famous Chivor and Muzo mines of Colombia. Much smaller quantities of emeralds, mostly of medium-light color, come from Brazil, and small, very intensely colored stones, characterized by numerous minute inclusions of molybdenite with a metallic appearance, are found in the Transvaal.

In the last few decades, increasing quantities of emeralds have been found in a series of small deposits in East Africa—principally in _Zimbabwe_, _ Zambia, and Tanzania. These are quite a strong color, sometimes with a bluish green tinge; and they often contain mica plates and, sometimes, thin crystal needles. The most famous of these emeralds are the ones from and awana in Zimbabwe, which are valued for their color. Emeralds with similar character- is tics also come from the mountains of India and Pakistan as well as the Soviet Union (Urals), and formerly Austria: Value Stones of fine color, weighing more than 2 carats, are among the most highly valued gemstones, and their price may equal or exceed that of diamonds. Less ideally colored varieties-—too dark or too pale--are worth quite a lot less; and if they are slightly turbid as well, the value is reduced even further.

Simulants and synthetics The Romans are known to have imitated emerald with skillfully worked green glass. Glass was also used in later centuries; extraneous particles sometimes being incorporated to simulate inclusions.

Doublets have also been used as imitations, with a lower portion of green glass and a top portion of garnet, or triplets, with a layer of colored cement sandwiched between two layers of colorless beryl, synthetic spinel, or quartz, Synthetic emeralds have likewise been widely produced over the last few decades. Generally, of good color, these are mainly distinguished from the natural variety by their inclusions and other growth features. There are a lot of these synthetic stones about, but their cost is quite high, so that the market for them is saturated.

## Topaz:

**Appearance:** It has a definite, uniform sky-blue color, usually without any overtones. Often pale, it can be bright or very rarely an intense blue. lt sometimes has a slight gray or even greenish tinge, giving it a lifeless appearance. Gemstones of several carats or even several tens of carat! in weight are relatively common. Furthermore, they are usually wholly or almost free of inclusions. This is often the case where large amounts of material of no great value are available; the fewer clear pieces are discarded. The most common cut is the oval, with the crown and pavilion consisting of very many lozenge-shaped facets, but all the mixed cuts, plus the step cut, are used. As with all light-colored gemstones, the value of blue topaz increases with Intensity of color, provided this is attractive and not somber. Like other types of topaz, it cleaves readily and this can affect its durability.

**Distinctive features**: There is, at first sight, some resemblance to aquamarine; but close observation will distinguish the two, as aquamarine always displays a very attractive pleochroism from blue to greenish blue or

even bluish green. Topaz is usually a more definite blue, if any-thing with a grayish tone, which certainly - distinguishes from aquamarine. Measurement of the density alone is not enough to distinguish topaz from synthetic blue spinal, which can be very similar in color. Before measuring other physical properties, such as the refractive indices, the stone can be examined under a lens for signs of birefringence. Although faint, a doubling of the facet edges will be visible in topaz. if this is present, one can immediately rule out the possibility of its being synthetic spinel or glass, both of which are singly refractive.

**Occurrence**: Blue topaz is found in various parts of Brazil, Mexico and. the United States. It is mined in Burma (In the Majok region famous for rubies) and the Soviet Union (chiefly in the Urals and the Kamchatka Peninsula). it le also found in Namibia and Nigeria.

**Value**: Quite low, several times less than that of aquamarine. The ready availability of blue topaz on the market. even in pieces of considerable size, is probably responsible for this.

**Simulants and synthetics**: Because blue topaz is a relatively minor gemstone compared with aquamarine, it is the latter that is imitated by glass or synthetic blue spinel. Although blue topaz has not been manufactured synthetically on a commercial scale, a completely natural-looking blue coloration has been produced during recent years in colorless topaz by means of irradiation. This practice, regarded as legitimate in the trade, unless performed in such a way as to cause appreciable residual radiation (fortunately, very uncommon), is becoming increasingly widespread and is one of the reasons for the present abundance of blue topaz.

## Ruby:

The people of Pakistani Kashmir are sitting on a treasure chest: Millions of rubies, estimated to be worth up to half a billion dollars, are lying beneath them.

Pakistani Kashmir has just one mine and one exploration site, where miners dig to assess the potential of the jewels below. But the region has proven reserves of more than 40 million grams of rubies, and inferred resources of nearly 50 million grams, according to geological surveys commissioned by the provincial executive. Experts believe tapping into the gem reserve could transform the fortunes of a region home to four million people largely living off modest incomes. Yet precious stones currently account for less than one percent of Kashmir's tax revenues.

## Tourmaline:

A complex borosilicate of aluminum and alkali, with Iron, magnesium, and other cations. The name is apparently derived from the Sinhalese turamali, referring to gems of unknown identity—probably zircons.

**Crystal system Trigonal.**

**Appearance**: It usually occurs as long, three-sided prisms, which are often well terminated; but sometimes it is found as parallel or radiating groups of long, thin striated prisms. It has one of the widest color ranges in the mineral world. The most common color is black, but tourmaline may be pink, violet-red, brownish yellow, blackish brown, various shades of green, light blue, blue-green, dark blue, and (rarely) colorless. Fine crystals with concentric zoning are found; typically they are red on the inside and green on the outside, and are known as "watermelon" tourmalines Also found are crystals with transverse zoning, the color of the crystal gradually changing from one end to the other, as in the "Moor's head" crystals found on the island of Elba. Tourmaline has good resistance to weathering and is therefore often found in alluvium.

**Physical properties**: It has a hardness of 7 and a density of approximately 3.02 to 3.20 g/ems, with some variation between types; from 3.03-3.06 g/cma for the pink, red, brown, and light green varieties; 3.08 g/cm3 for the dark green; 3.10 g/cm?' for the dark blue to yellow; and 3.15-3.20 g/cma for the black. The refractive indices are about ne 1.62, no 1.64, thus with quite marked birefringence, and strong pleochroism[3].

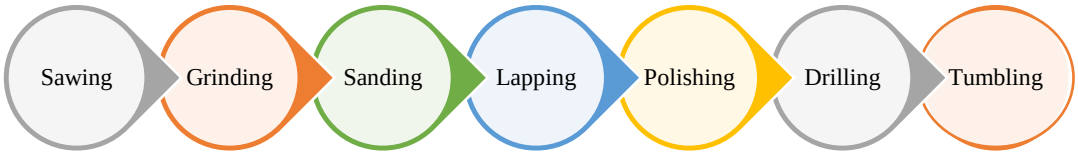
Genesis Tourmaline is found in differentiated dikes of silica-rich intrusive rocks and is quite common around granitite, where pegmatitic, pneumatolytic mineralization are abundant.

**Occurrence**: It is widely distributed, the most common variety being black tourmaline, which is of no value and a gem. The most famous deposits are in Sri Lanka, the Soviet Union (Urals), Afghanistan, Burma, the United States (California, Maine, Connecticut), Brazil, Tanzania, Zimbabwe and Namibia.

[3] http://www.gemstone.pk/content/59-tourmaline-gemstone-

## Gemstone Cutting and Polishing Process:

The process of cutting and polishing is quite in detail which is elaborated through a figure pasted below.



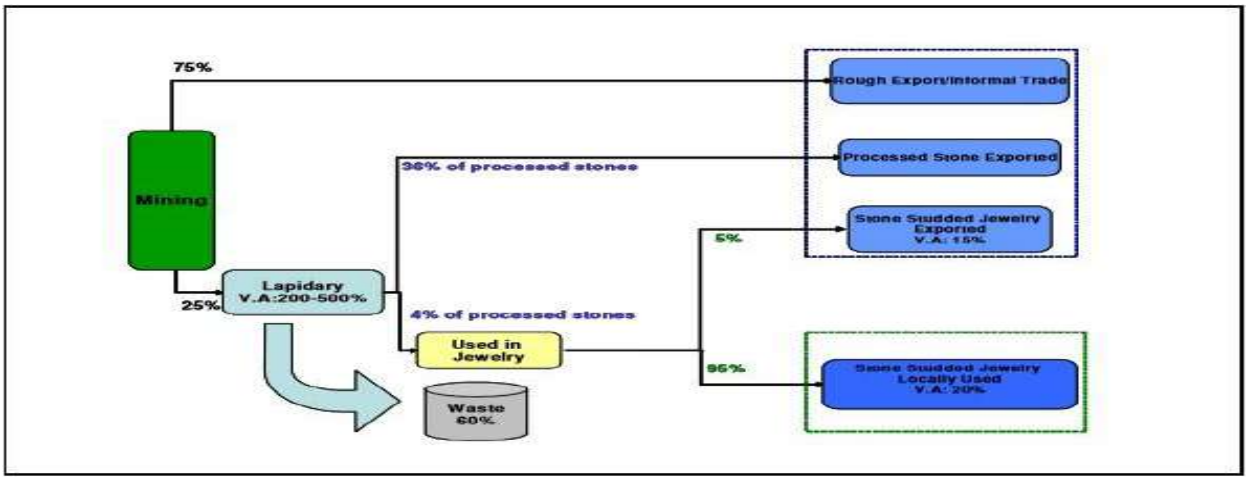

Gemstones are usually cut and shaped with circular blade. Furthermore, water and oil are used to wash the rubble and prevent the stone and blade from overheating. Various sizes of saw blades are used for depth in cutting of a stone.

In grinding gems are shaped in desired rough form by machine with diamond impregnated wheels. In next phase of cutting and polishing of a stone, sanding is the deep scratches left behind after the grinding process are removed by using the super abrasives and also for the finest shaping of the gem.

The next part of the process is lapping in which the flat and rotating disk is used to give a proper shape to the gems. After shaping, the polishing process starts which is embedded with a technique of shining the surface of a gem.

Drilling is the second last phase of which is required to be made through the gem to create the beads. The gems are drilled by using the small rotating rod of diamond tip. Whereas the tumbling is the last stage of cutting and polishing of a gemstone in which the remaining large rough stone are turned in a barrel at slow speed with water and abrasives for few days until it turned into a fine and smoother stone of attractive shape.

*Figure 1: Current Gemstones Value Chain*




The above diagram demonstrates the current value chain analysis for gems. It indicates that there is a value addition on minor scale but the waste level is high because of outdated mining techniques and the poor

infrastructure. Apart from this, the exploration of gems has never been mechanized and equipped with modern requirements.

## Gemstones Industry Competitiveness:

To understand the current state of competitiveness of the Gems industry, the below graph is a true picture of the industry. It is structured around four pillars.

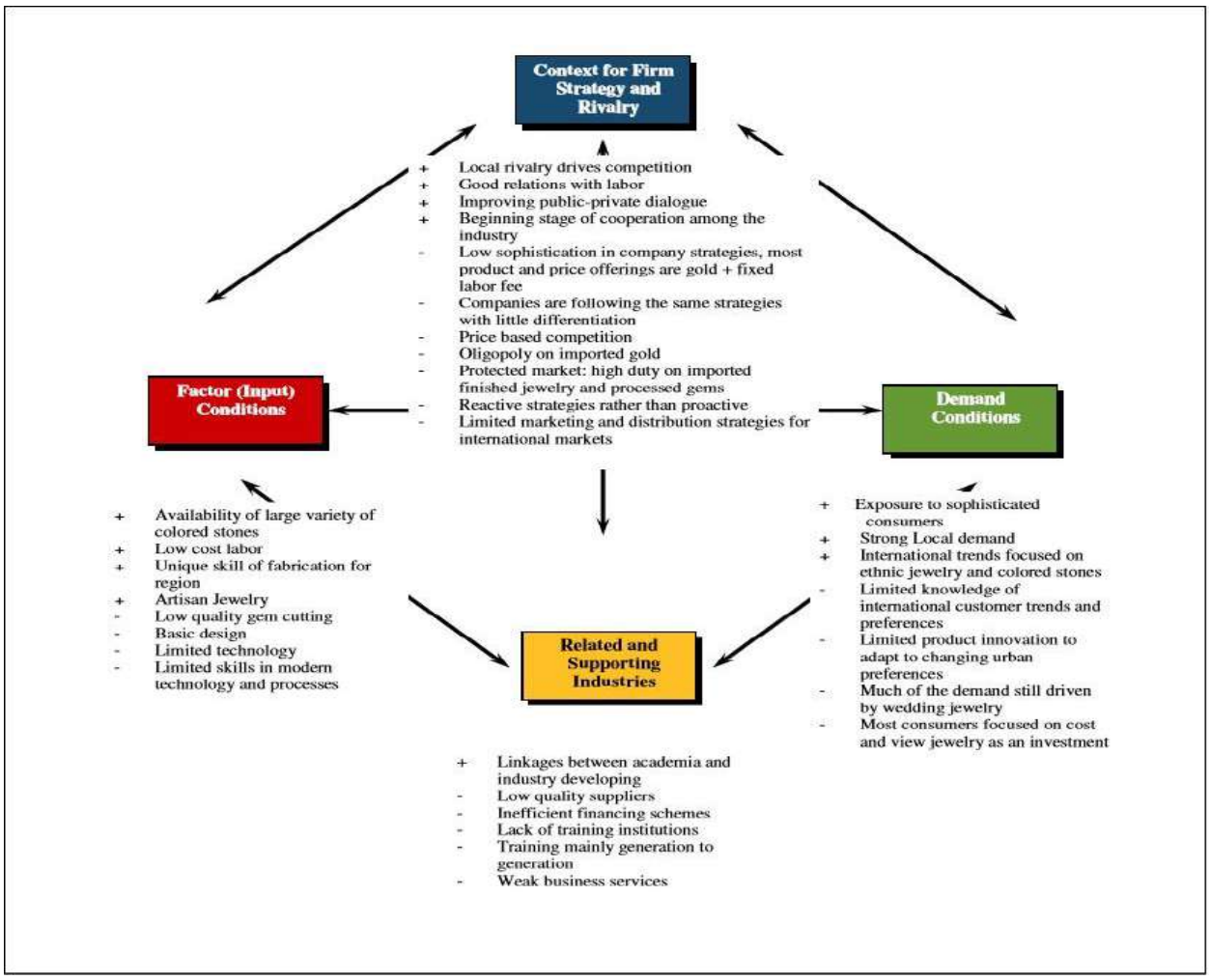
1. Factor (input) conditions: skilled labor, infrastructure, assets and resources.

2. Demand conditions: size and type of accessible demand.

3. Related / supporting Industries: presence of supplier and supporting industries.

4. Context for firm strategy and rivalry: conditions for conducting business.

*Figure 2: Gemstones Industry Competitiveness*




# Industry Profile and Segmentation of Jewelry

**Jewelry Overview:**

The imitation jewelry as the name is indicates, is made of precious metals like gold, platinum and silver but its shape and effect look like the precious metal jewelry and some people call it an artificial jewelry in Pakistan and across the subcontinent. The imitation jewelry is often made up of synthetic gemstones as decorative stones and small number of low-grade gemstones as decorative stones. Metal material are usually made of copper or copper alloys because copper is not only cheap but also has excellent casting properties. It is easy to make jewelry in customized shapes.

The imitation Jewelry market type include:

- Rings
- Necklaces
- Earrings
- Others

The market applications of Jewelry can be divided into:

- Decorate
- Others

Pakistan's jewelry sector is predominantly retail driven due to a huge local market. Karachi and Lahore are the main hubs for jewelry manufacturing. Pakistani designs are distinctive and highly differentiated from the Indian offerings and desired in western Pakistani and Indian expatriate markets alike.

The domestic market is driven by demand for 22kt traditional jewelry. The primary reason for purchase of jewelry in Pakistan is marriage, as gold is perceived as a form of investment. It is accumulated for this purpose over several years. However, with increasing awareness and education, demand is evolving in line with international fashion trends.

The range of jewelry items produced by the jeweler is very wide. The most popular items of Pakistan's jewelry are Bangles, Earrings, Rings, Pendants, nose pins, necklaces, and teekas.

The Jewelry industry is highly fragmented, with very few players having complete in-house production facilities. Most of the players outsource manufacturing to small vendors. The use of high-technology machinery is missing throughout the value chain. A few exporters producing chains and bangles in large quantities have invested in modern production techniques. They are exporting successfully to markets in Dubai and UAE where some of them have established their own offices. These manufacturers hallmark their goods in order to comply with UAE regulations.

Each of the major cities of Pakistan has a "Sarafa Bazaar"32, consisting of hundreds of small showrooms, bullion dealers and casting shops.

Presently, there are limited training opportunities for the jewelry sector. The age old ustaad shagird (master-apprentice) method of teaching is most popular. A few leading shops have their own small training workshops where they teach students who are later employed by the same shop owners. These establishments provide on the job training rather than formal teaching.

**Imitate Jewelry Trend in Pakistan:**

As Jewelry plays an important role in enhancing the beauty of the blushing bride on weddings, the trend of imitation jewelry gaining popularity and becoming more attractive for Pakistani brides with variety of designs and colors. Presently, the metropolitan cities like Lahore and Karachi are the major center of imitate Jewelry manufacturing. Apart from this, on small scale many manufacturers and traders exist in various towns across Pakistan.

The jewelry industry is highly fragmented with few players having complete in-house production facilities. A small number of high-end retailers are pursuing backward integration along with efforts to brand their services and products. However, the casting technology for Gold in Pakistan has not kept up with international standards. The techniques and tools are used in Pakistan are only adequate for 22kt traditional Jewelry manufacturing but not for the technology driven 14 to 18kt contemporary jewelry and volume for production.

The local market of Pakistan is animated due to social mandate or practice to invest in gold and artificial jewelry. Especially artificial jewelry due to cost effective and fashioned commodity. The most jewelers showcase their designs that adhere to the modernity and local demand.

**Jewelry Manufacturing Process:**


The process of Jewelry manufacturing starts from placing order. In Jewelry designing, a blue print is carried out with customized designing. The designed jewelry then molded for the jewelry making process. Casting is the most complex process embedded with containers in which wax molds are placed. The metal choice includes (silver, gold, etc) is poured into the mold and allowed to cool. Then Jewel casting is revealed. For further process, filling is used to remove excess metal which is out of surface then smooth and shaped as it is required. Following the whole process, it also includes embellishment and then finished product is presented or displayed for sale.

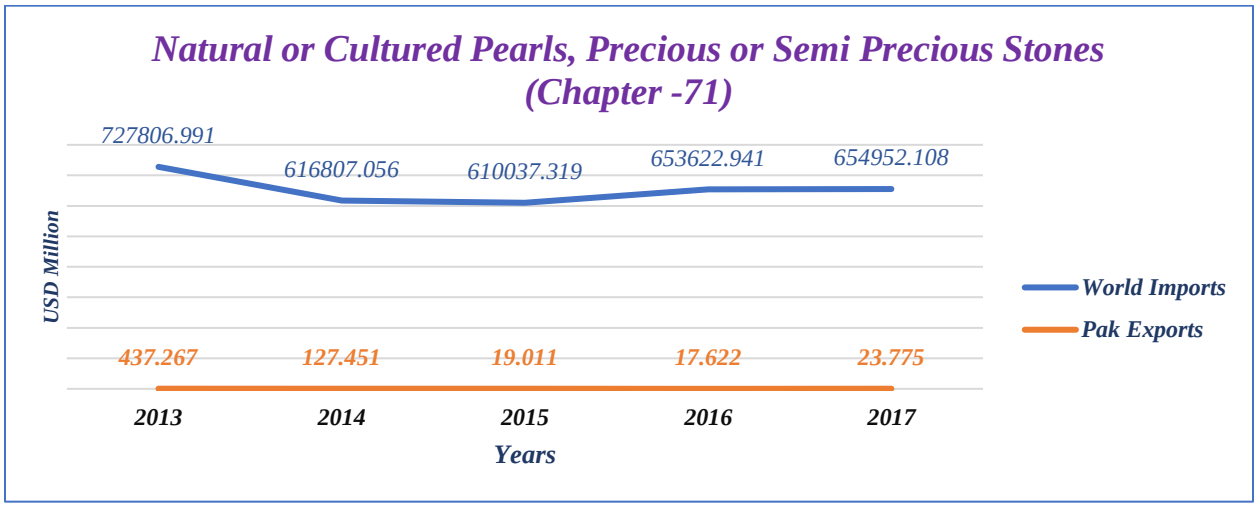
## Waste & Scrap:

Waste & scrap of gemstones accumulate in huge quantity while mining and further cutting and polishing process. Due to use outdated technology and below par process are the main constraint to use this waste and scrap for further value addition in Pakistan. The debris of gems is often exported at low cost which do not only lower the profit margin but also remain uncompetitive in the international market. However, in the current portfolio of Gems & Jewelry export and in absence of modern methods it is considered as the potential product of Pakistan.

## Trade Scenario of Gems and Jewelry

Pakistan has been blessed with the abundant resources of precious and semi-precious stones. It is a fact that low income countries heavily rely on just few commodities for the bulk share of their exports. In Pakistan, some sectors facing decline couple of years ago are showing now some positive indicators as the exports of Gems and Jewelry have witnessed a significant increase in last year. The positive trend reflects the potential of this sector.

*Figure 3: Pak Export of Natural or Cultured Pearls (Chapter - 71)*




*Source: Trade map*

The graph represents the comparison of Pakistan's exports of Gems and Jewelry and the world import of the same. There are two trend lines the blue trend line shows the demand for gems and jewelry in the world and brown horizontal line belongs to the exports of Pakistan. This analysis is drawn on HS digit 02. The blue trend line shows the higher trend in 2013 with highest world import value of gems and jewelry in past five years that is almost about $727 billion. In 2014-15 the world demand for gems and jewelry jumped down to almost $600 billion. Since 2016, there is a rise in the word demand of gems and jewelry. Whereas the exports of Pakistan sharply declined from the year 2013 to 2015. But after then there is a gradual increase in the export of gems and

jewelry. In 2017, Pakistan's exports of gems and jewelry have posted a significant growth of 34.92% as compare to the corresponding year.

## Pakistan's Major Exports of Gems and Jewelry:

The major export of Pakistan is further divided into three categories including Gemstones, Jewelry and waste and scrap. However, this part of the report is based on major export items of Pakistan.

| Comparison World Import Vs Pak Export to World | | | | | | | |
|---|---|---|---|---|---|---|---|
| Product: 71 Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad ... | | | | | | | USD Million |
| Product code | Product label | World imports 2015 | Pak world export 2015 | World imports 2016 | Pak world export 2016 | World imports 2017 | Pak world export 2017 |
| '711510 | Catalysts in the form of wire cloth or grill, of platinum | 336.222 | 7.113 | 324.142 | 5.102 | 284.954 | 15.267 |
| '711319 | Articles of jewellery and parts thereof, of precious metal other than silver, whether or not ... | 60429.422 | 5.744 | 59345.545 | 7.126 | 64005.297 | 4.362 |
| '710310 | Precious stones and semi-precious stones, unworked or simply sawn or roughly shaped, whether ... | 775.51 | 4.463 | 1175.752 | 3.126 | 1319.805 | 2.733 |
| '711620 | Articles of precious or semi-precious stones "natural, synthetic or reconstructed", n.e.s. | 1714.067 | 0.231 | 1318.088 | 0.737 | 1246.525 | 0.313 |
| '711299 | Waste and scrap of silver, incl. metal clad with silver, and other waste and scrap containing ... | 6451.742 | 0.18 | 7520.725 | 0.673 | 7395.151 | 0.287 |
| '711790 | Imitation jewellery (excluding jewellery, of base metal, whether or not clad with silver, gold ... | 2339.718 | 0.282 | 2191.423 | 0.282 | 2087.384 | 0.156 |
| '710122 | Cultured pearls, worked, whether or not graded, but not strung, mounted or set, worked cultured ... | 1525.792 | 0.068 | 1976.91 | 0.096 | 4196.06 | 0.14 |
| '710490 | Precious and semi-precious stones, synthetic or reconstructed, worked, whether or not graded ... | 915.369 | 0.26 | 835.352 | 0.188 | 1284.675 | 0.134 |
| '710391 | Rubies, sapphires and emeralds, worked, whether or not graded, but not strung, mounted or set, ... | 6449.014 | 0.003 | 7930.382 | 0.093 | 5677.542 | 0.113 |
| '711320 | Articles of jewellery and parts thereof, of base metal clad with precious metal (excluding ... | 235.988 | 0.001 | 230.459 | 0 | 231.16 | 0.095 |
| '711610 | Articles of natural or cultured pearls, n.e.s. | 1094.973 | 0 | 1309.532 | 0 | 1999.662 | 0.061 |
| '711719 | Imitation jewellery, of base metal, whether or not plated with precious metal (excluding cuff ... | 5503.806 | 0.032 | 5215.144 | 0.034 | 5072.477 | 0.048 |
| '710399 | Precious and semi-precious stones, worked, whether or not graded, but not strung, mounted or ... | 4632.367 | 0.487 | 2128.841 | 0.033 | 2120.422 | 0.036 |

*Source: Trade map*

This table provides the contrast of world import and Pak export to world. Though Pakistan has tiny export size of Gems and Jewelry still first 13 major export items are considered as major export of this sector. Whereas the world import numbers are quite high. The only product "Catalysts in the form of wire" has export value of $15.267 million. Whereas the remaining products sum is less than the top product of Pakistan. In addition to this, the table also provide the three-year contrast of demand and supply. Furthermore, the existing sub categories of Gems and Jewelry is undertaken as the base for detailed analysis of the sector in next part.

## Identification of Potential Products:

This segment of the report is comprising of potential products. Three sub sectors of the main sector are identified which include Gems, Jewelry and Waste and scrap. Based on this grouping, each section describes the potential items.

The criteria for the identification of Gemstones is as followed;

- World import >$30 million and Pakistan's export>$0.25 million

The criteria for the identification of Jewelry or imitated Jewelry is as followed;

- World import>$7million and Pakistan's export>$3 million

The criteria for the identification of waste and scrap is as followed;

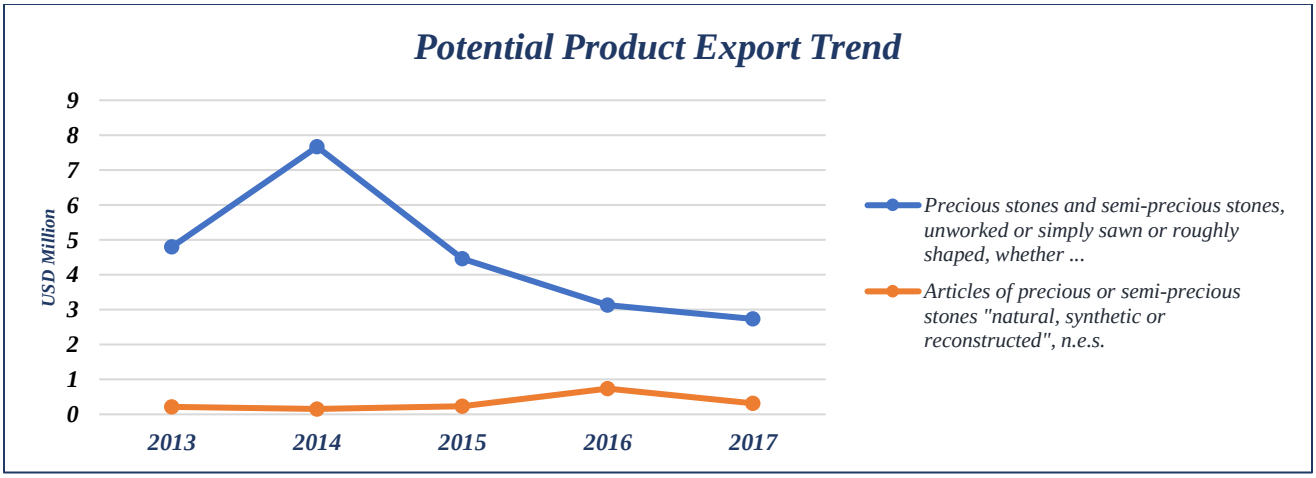
- World import>$5million and Pakistan's export>$0.2million

These three sub groups of export items are identified by following the above criteria of demand and supply. Therefore, this division also provides further the major importers and competitors of Pakistan. However, the export numbers are not in the favor of Pakistan but still the competitors are identified in order to learn their export strategy.

## Gemstones Potential Products:

Following the above criteria of identification of potential items. Two products on HS-06 digits are identified as potential product. Over the years, export of precious and semi-precious stone is declining because less competitiveness and absence of value chain.

*Figure 4: Gemstones Potential Products*




*Source: Trade map*

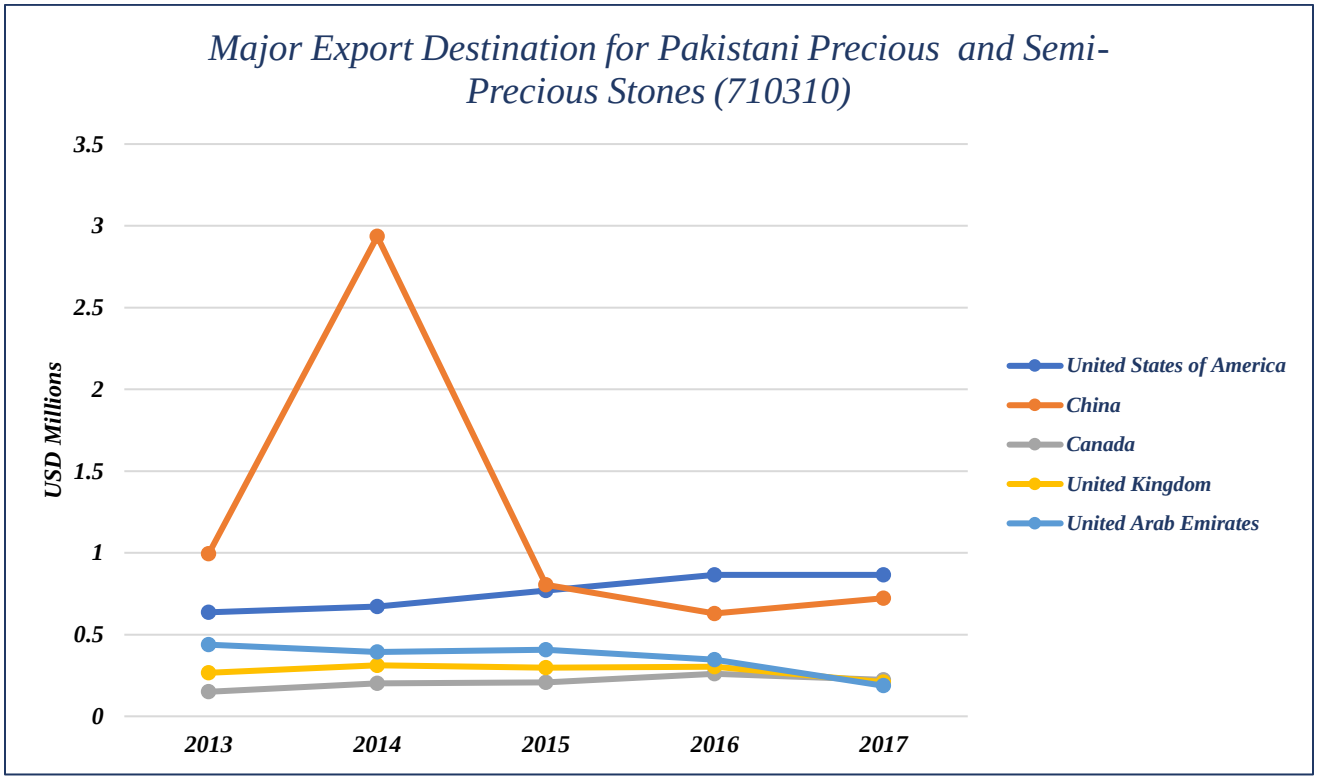
There are two potential products from a Gem group is identified and the graph shows the historical trend of Pakistan's exports of these items to the world over the years. Since 2013, precious and semi-precious stones

export is declining. Once there was a sharp increase during 2014 but again there is a declining trend. On the other side, Articles of precious or semi-precious stones export trend almost remained stagnant throughout the years.

## Major Export Destination of Potential Gemstones Products:

Gemstone group has two potential products. Both potential products have major export destinations. In addition to this, the major export destinations are explained through a graph with historical export trend.

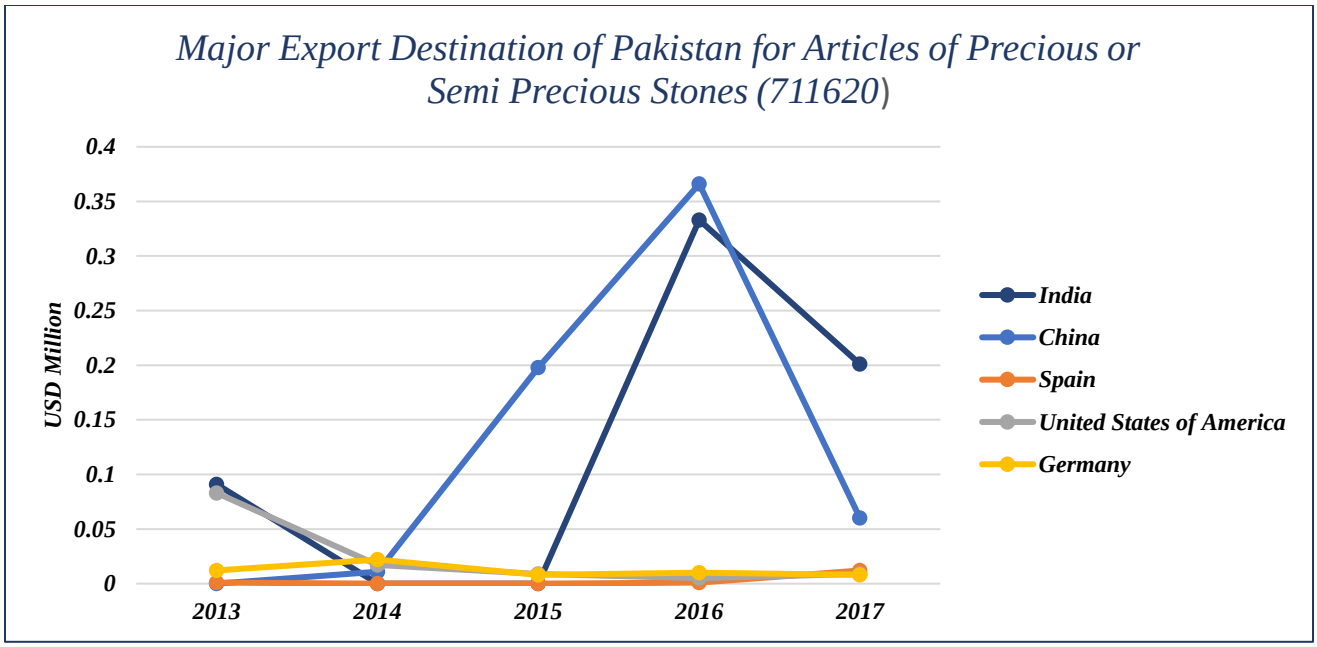
*Figure 5: Major Export Destinations - Potential Product Precious and Semi-Precious Stones (710310)*




*Source: Trade map*

The cluster of trend bars reflect the major export destinations of Precious and Semi-Precious stones of Pakistan in terms of export value. China almost remained the top export destination with a sharper increase in two years and the declining trend is persistent. Whereas USA is the second major export destination then Canada, United Kingdom and United Arab Emirates respectively.

*Figure 6: Major Export Destinations - Potential Product Articles of Precious or Semi-Precious Stones (711620)*

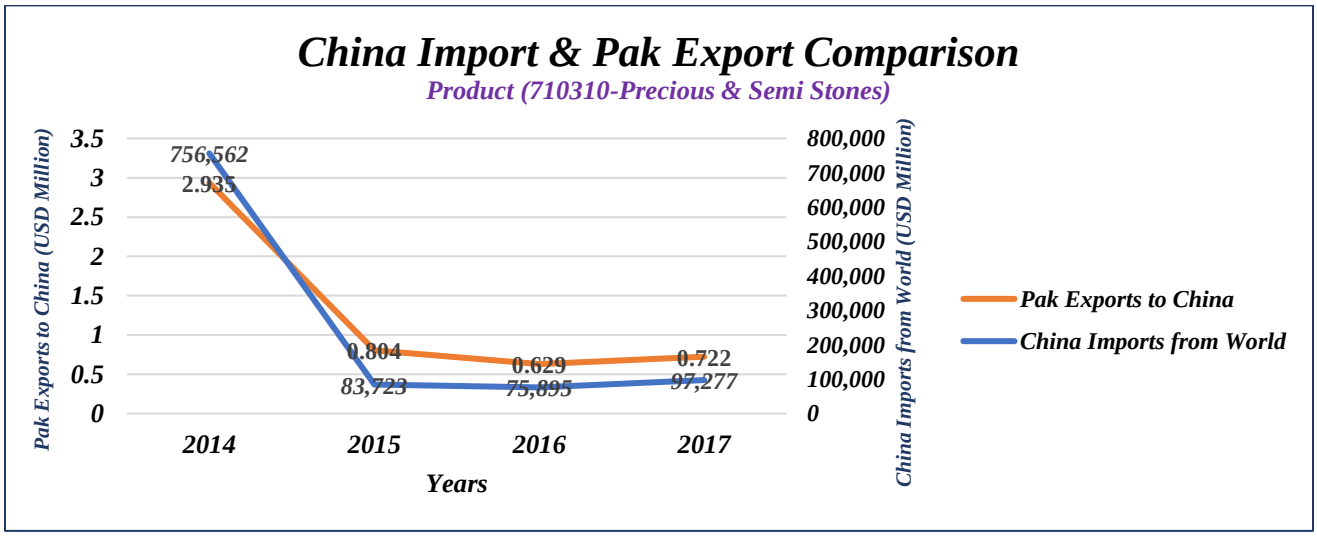



*Source: Trade map*

The dispersed trend bars reflect the major export destination for Pakistani Articles of precious or semi-precious stones. India and China are almost following the same trend in last 5 years. Whereas Spain, United States of America and Germany have also the established markets for Pakistani Articles of precious stones.

## Potential Markets for Precious and Semi-Precious Stones of Pakistan:

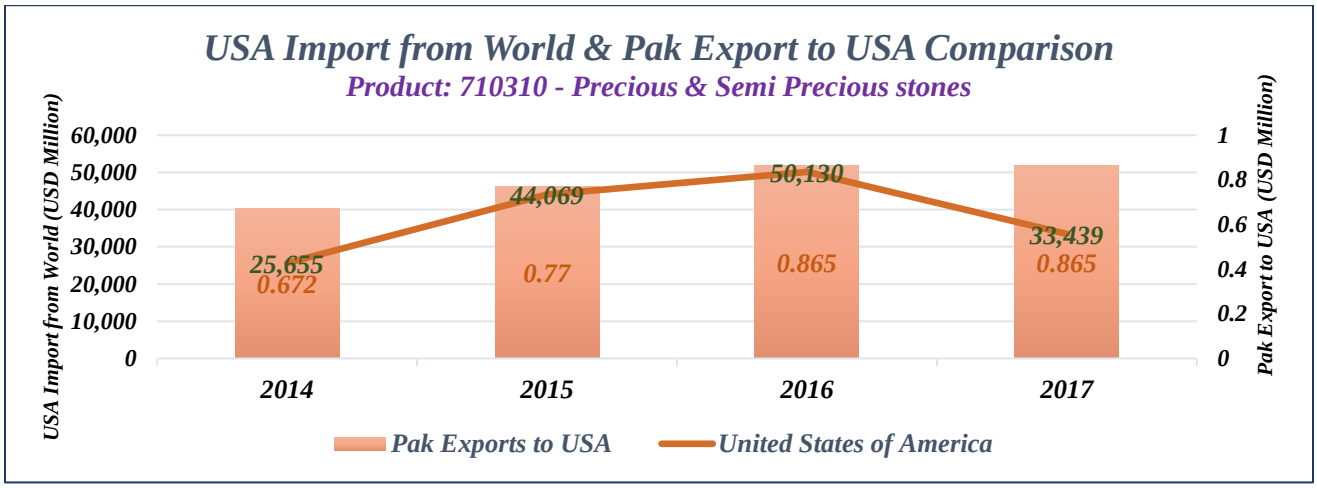
*Figure 7: Potential Market China for Precious and semi-Precious Stones (710310)*




*Source: Trade map*

The combo graph explains the contrast of China import from world and Pakistan's export to China. As china is identified as the potential market. Pakistan has a very low share as the trend line suggest that Pakistan's exports declined sharply after 2014 and then never picked up because of lack of competitiveness and lack quality. Recently, Pakistan has signed Free Trade Agreement (FTA) phase II. Pakistan needs to take benefit out of this trade facility by increasing the supply.

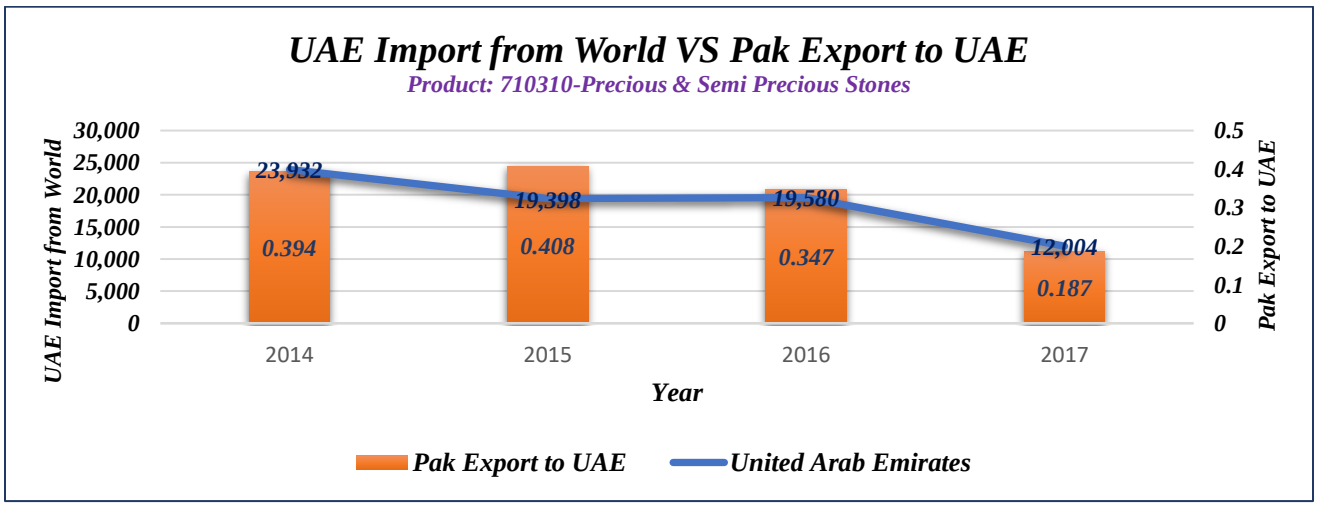
*Figure 8: Potential Market for Product Precious & Semi Precious Stones (710310)*




*Source: Trade map*

The second potential market for Pakistani precious and semi-precious stones is United States of America. The combo graph explains the USA import from the world and Pakistan's export to USA. There is a big gap and untapped potential for Pakistan. Therefore, it is required to not only improve the supply but the quality of the product as well in order to remain competitive in the USA market.

*Figure 9: Potential Market for a Product Precious and Semi-Precious Stones (710310)*

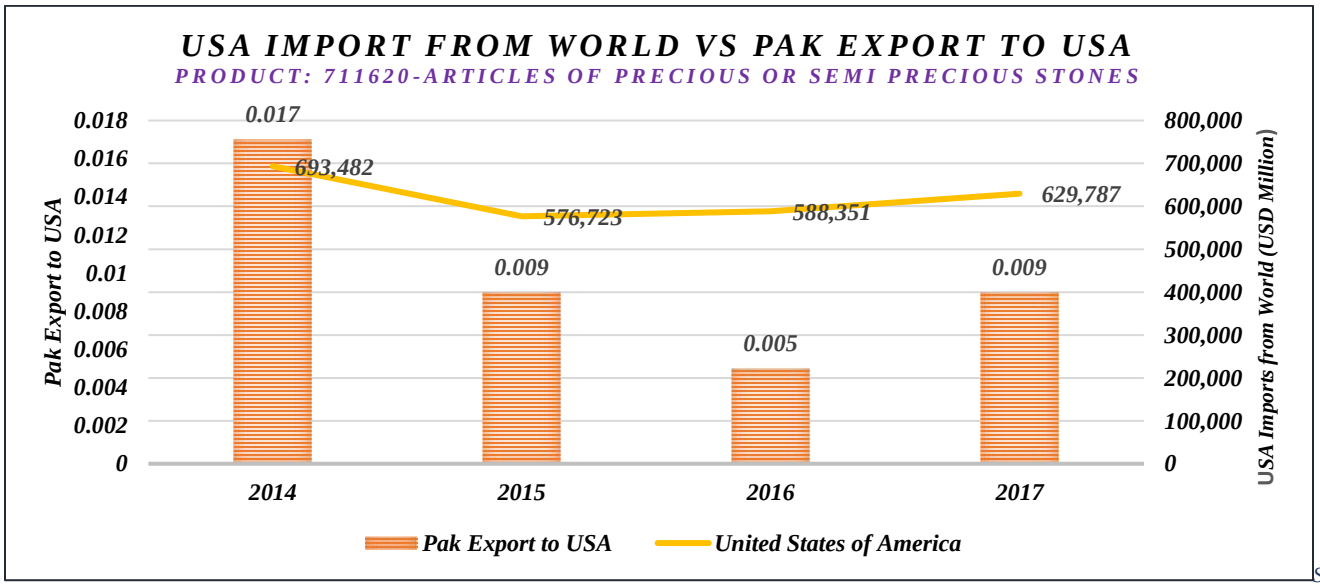



*Source: Trade map*

The third potential market for Pakistani precious and semi-precious stones is UAE. UAE is considered on of the largest market in the world as the maximum value addition of this item took place there. Therefore, the export value of Pakistan as compare to the import value of UAE is quite low which again compliment the untapped potential for Pakistan.

## Potential Markets for Articles of Precious and Semi-Precious Stones of Pakistan:

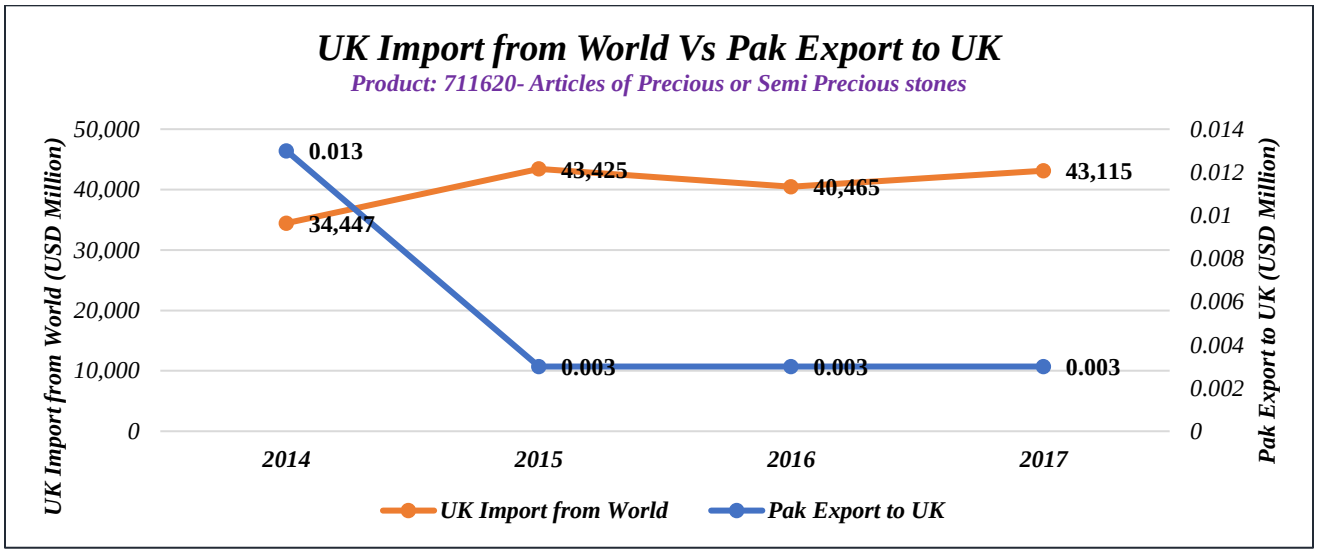
*Figure 10: Potential Market USA for a Product Articles of Precious or Semi-Precious Stones (711620)*




*Source: Trade map*

United States of America has identified as the potential market for Pakistani articles of precious or semi-precious stones. The yellow trend line of a combo graph explains the import of USA for this product. There is a significant demand for this product. Whereas Pakistan's export to USA is quite low than half a million. Therefore, at least there is a potential of increasing supply up to $5million for this item.

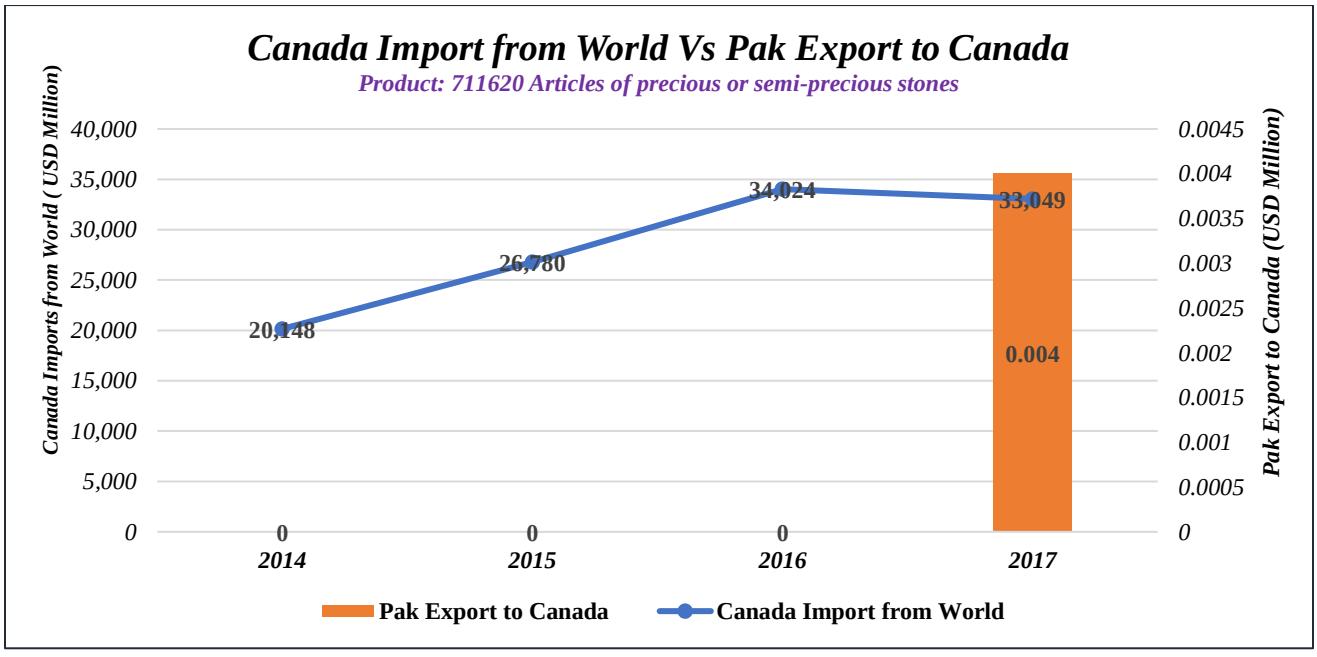
*Figure 11: Potential Market UK for a Product Articles of Precious or Semi-Precious Stones (711620)*




*Source: Trade map*

The blue trend line of the combo graph belongs to the export of Pakistan to United Kingdom. Whereas orange line belongs to the United Kingdom import from the world. There is a huge gap between the both trend lines. This indicates that there is an untapped potential for Pakistan.

*Figure 12: Potential Market Canada for a Product Articles of Precious or Semi-Precious Stones (711620)*



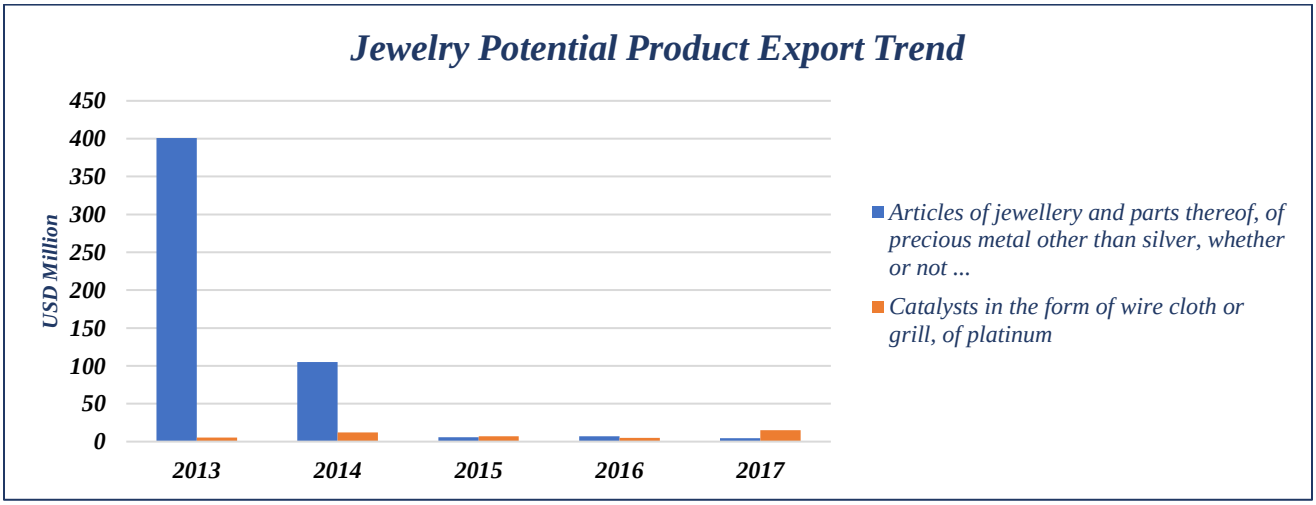

*Source: Trade map*

Canada is identified as potential market for Pakistani articles of precious or semi-precious stones. Pakistan has zero exports to Canada in past three years. In 2017, there is a little export to Canada. Whereas the significant import value of Canada compliments the potential exist for Pakistan.

## Jewelry Potential Products:

The criteria for an identification of potential item is quoted above. The demand for the imitate jewelry does not only exist in the international markets but the trend and demand in local market of Pakistan is also high as it is among fashionable items and associated with our culture and traditions. However, two products are identified as potential products which are depicted below in graph.

*Figure 13: Jewelry-Potential Products Export Trend*

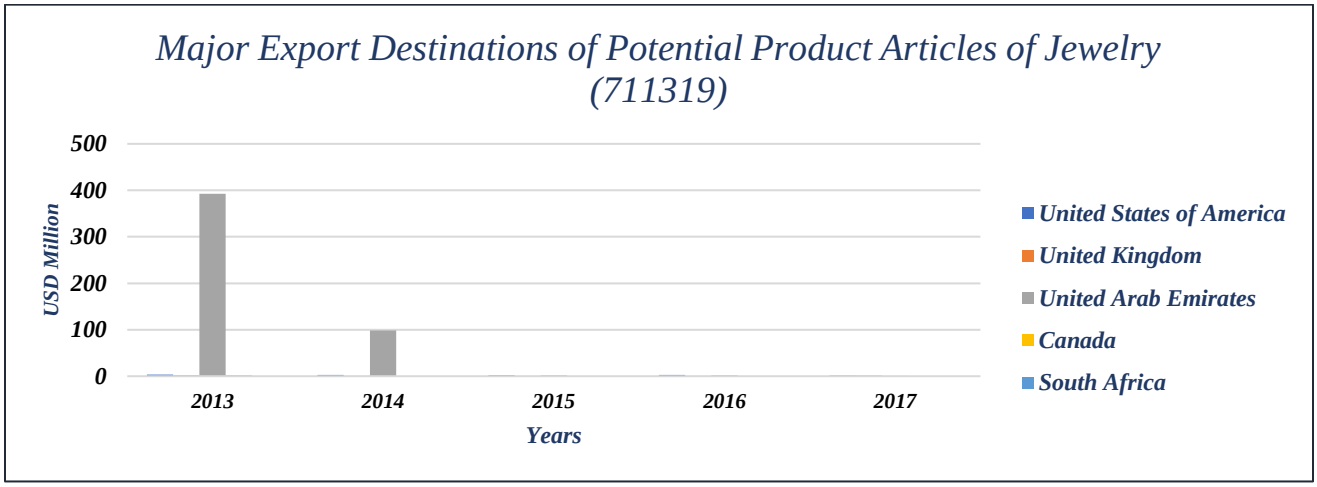



*Source: Trade map*

The contrast of two potential Jewelry export items is presented in this graph. The blue column bars belong to the article of Jewelry like metal or silver which is used as raw material for finished good. The historical export trend is spread over on 5 years in which it is quite clear that the export of this item has witnessed a sharper decline in past 5 years. Whereas the column bar belongs to another raw material e.g. wire cloth or grill which is used in manufacturing imitate jewelry. There is an extreme volatility witnessed in the export of catalysts.

## Major Export Destinations of Articles of Jewelry:

*Figure 14: Major Export Destinations of Potential Product Articles of Jewelry (711319)*

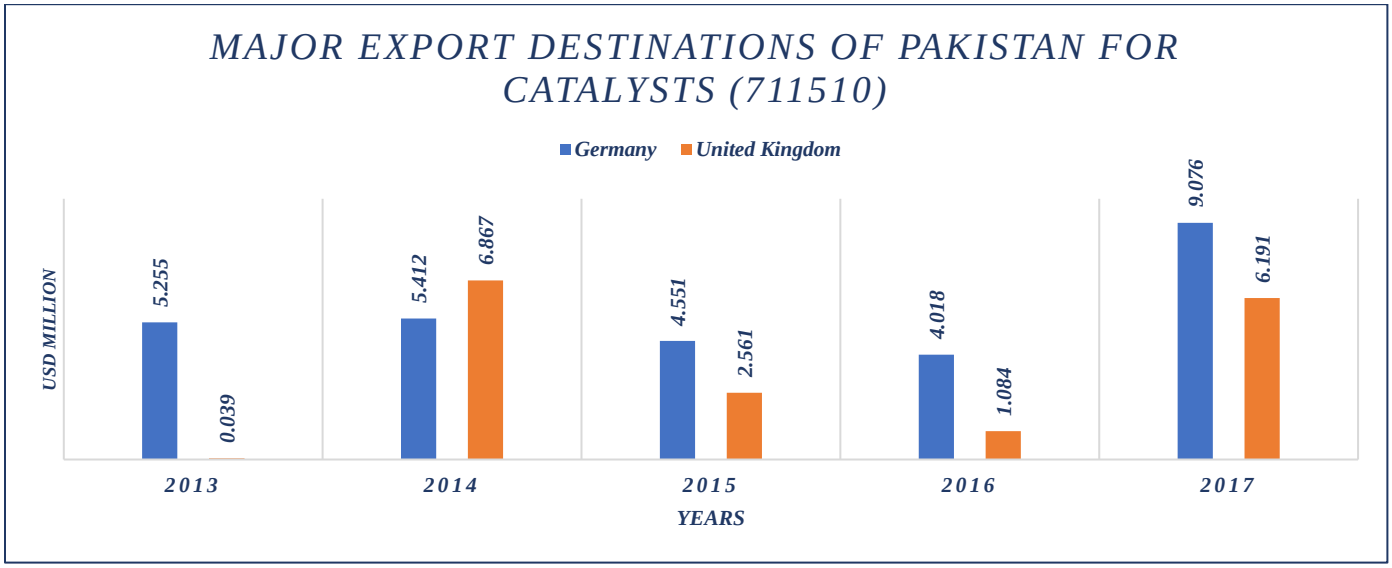



*Source: Trade map*

The importing markets have shown in this graph which are almost high-end markets in the world. They import raw material of Jewelry to manufacture the value added and customized products. The export trend in past five years has never remained encouraging for Pakistan. However, in 2013 Pakistan has exported this product to United Arab Emirates in high numbers. But since then there is gradual decline in the export of articles of jewelry.

## Major Export Destinations of Catalyst:

*Figure 15: Major Export Destination of Potential Product Catalyst (711510)*

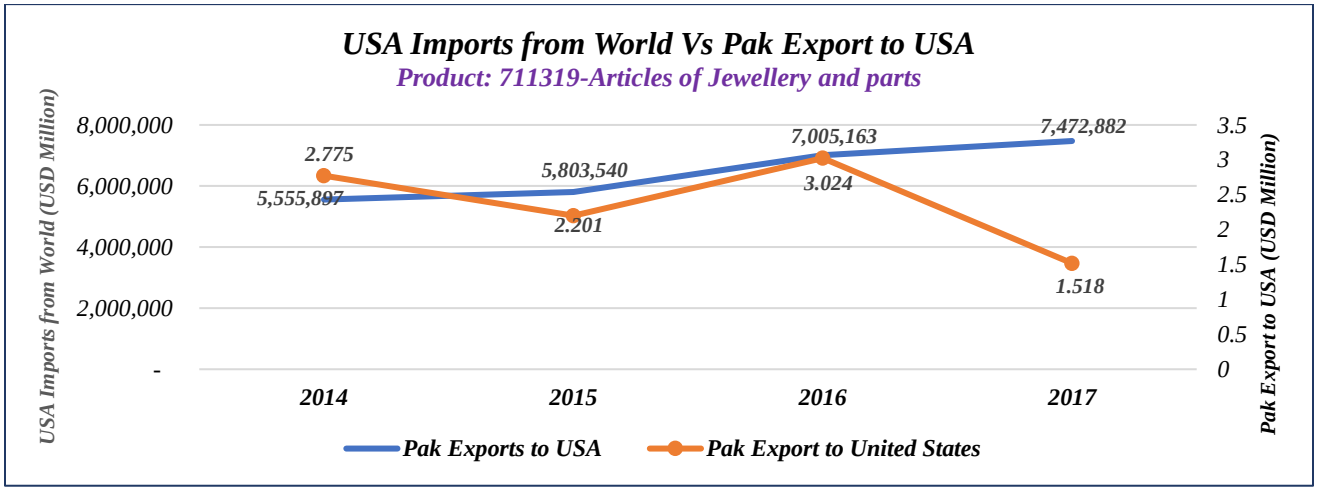



*Source: Trade map*

The above graph presents the export trend with respect to the export destination in last five years for a product Catalysts. Germany almost remained the top export destination for this product exported by Pakistan in last five years. But still the export numbers are not significant and encouraging for Pakistan.

## Potential Markets for Articles of Jewelry and Parts:

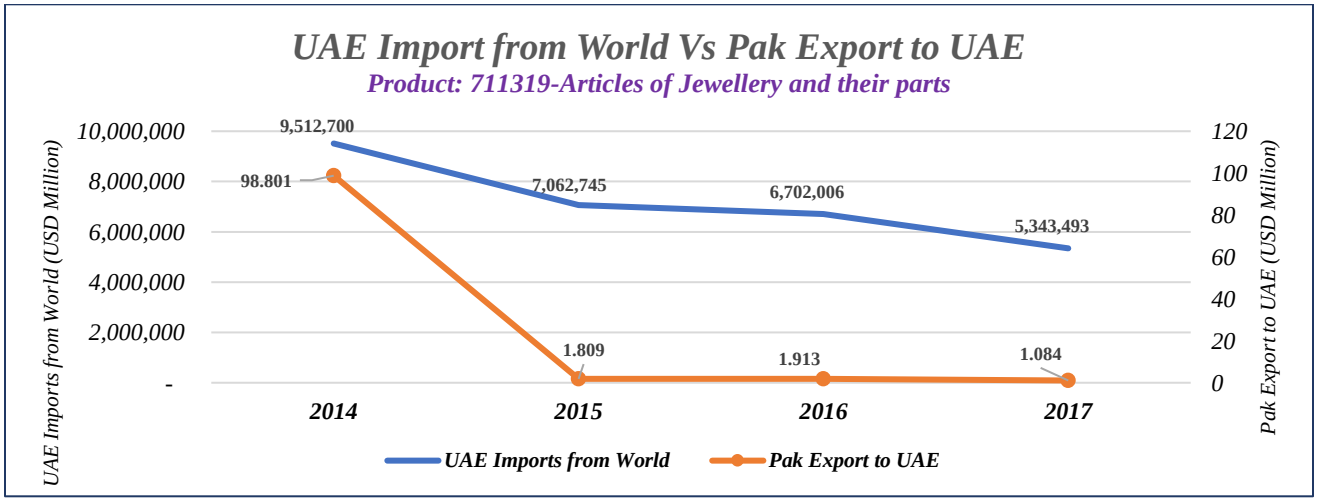
*Figure 16: Potential Market USA for Articles of Jewelry (711319)*




*Source: Trade map*

Pakistan almost export raw from of jewelry to the world. Here in this combo graph the contrast of two variables have presented. The orange trend line belongs to the export of Pakistan to USA. Whereas the blue rising trend line belongs to the USA import from world. In past four years, Pakistan's export to USA dropped down from $2million to $1.5million. This reflects the potential exist for Pakistan but the supply and quality of the product is a major bottleneck.

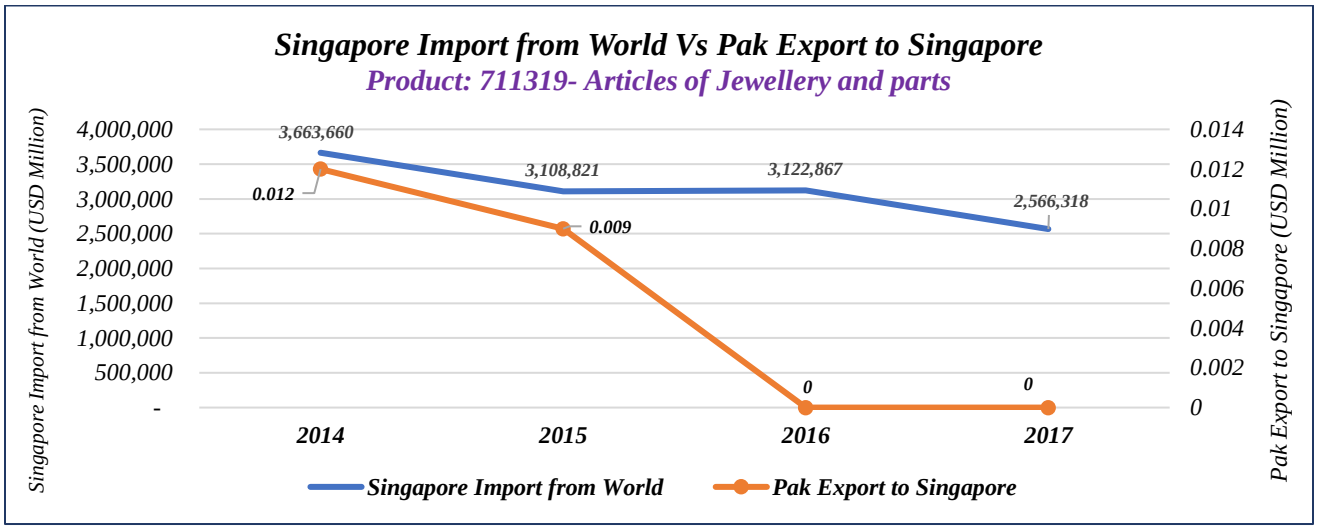
*Figure 17:Potential Market UAE for Articles of Jewelry (711319)*




*Source: Trade map*

UAE is considered as the world major market and trading center for Jewelry. Therefore, the blue trend line itself is explanatory. Though, there is declining trend but still the import value is much higher and leave potential for Pakistan. On the other hand, Pakistan's export is suffering since 2015. There is big drop down from $98million to $1.08million in past four years.

*Figure 18: Potential Market Singapore for Articles of Jewelry (711319)*

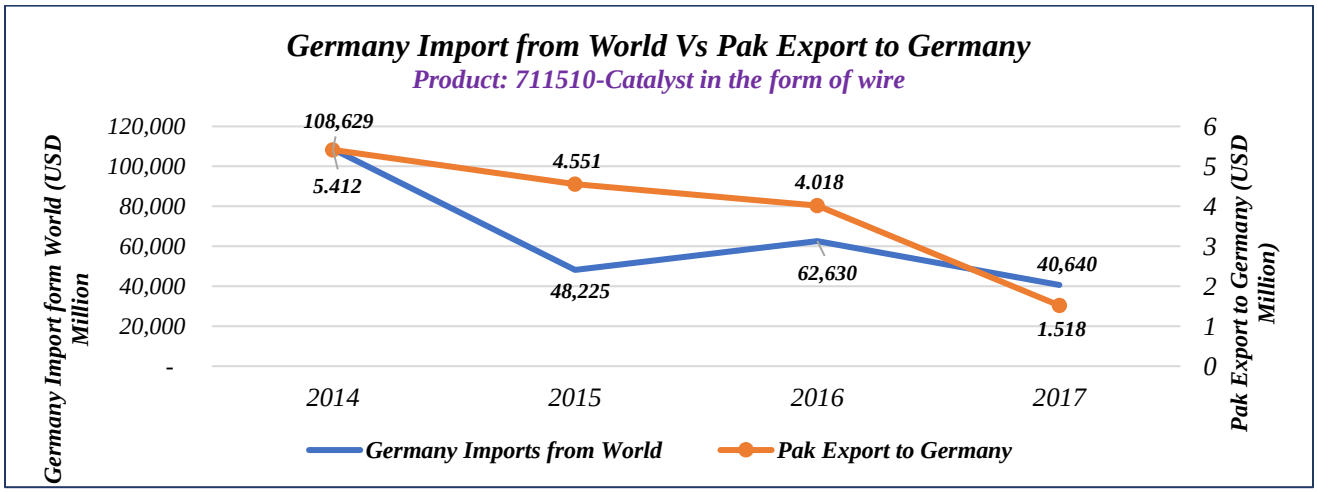



*Source: Trade map*

Singapore is considered as one of the high-end markets with much value addition and services. The contrast of demand and supply suggest that there is much potential exist for Pakistan. Once Pakistan has an export in little numbers but in past two years there is a zero export of Pakistan to Singapore.

## Potential Markets for Catalyst in the form of Wire:

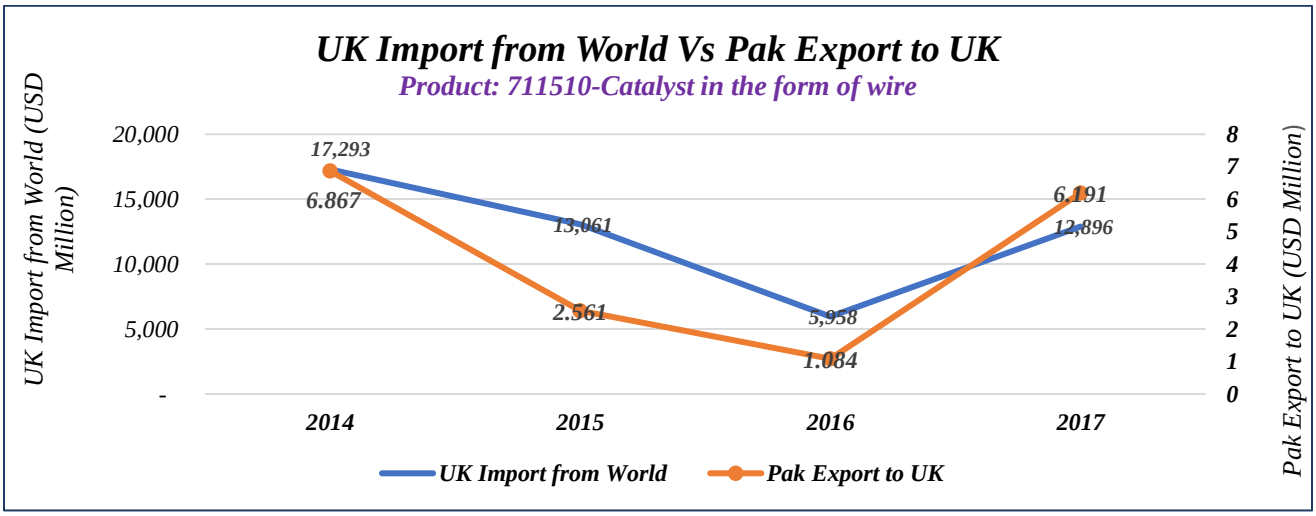
*Figure 19: Potential Market Germany for Catalysts (711510)*




*Source: Trade map*

There is a volatility in the import of Germany from world but still there is window of opportunity for Pakistan to increase its export to Germany. Whereas Pakistan's export to Germany has once significant numbers but since 2015 there is a sharp decline in the export of Pakistan to Germany.

*Figure 20: Potential Market UK for Catalyst (711510)*




*Source: Trade map*

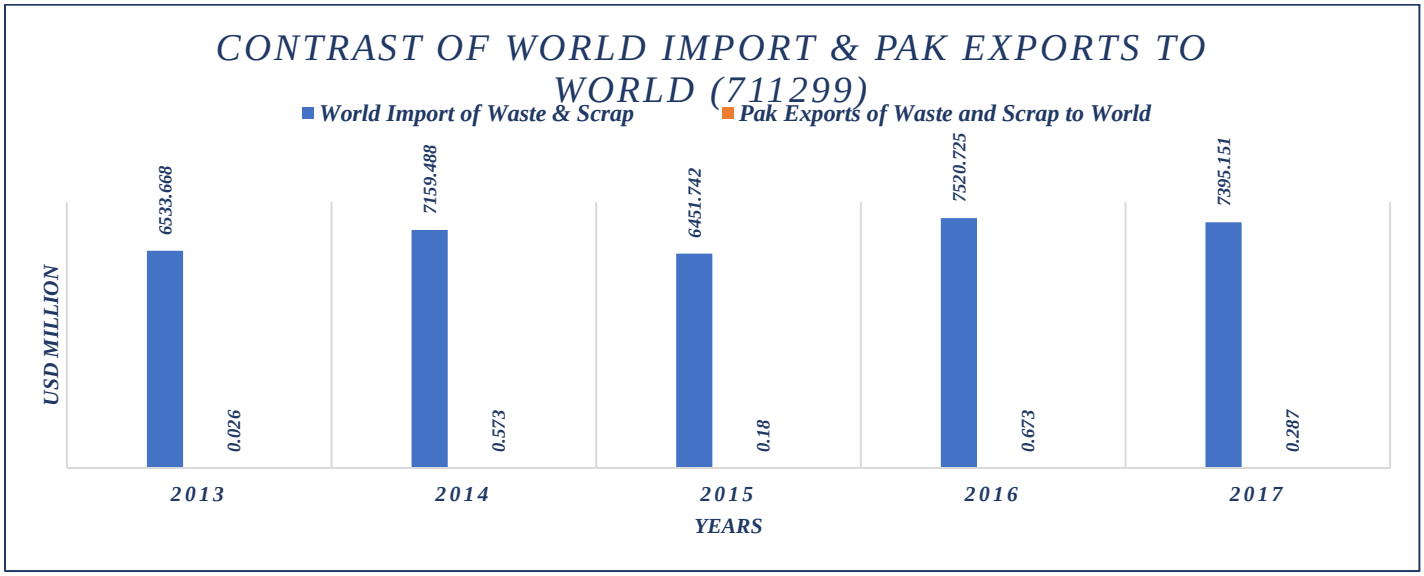
The combo graph shows both the demand and supply side. UK import once declined but then picked up. Whereas Pakistan's export to UK for this item also has the parallel trend. Therefore, Pakistan need to increase the export by utilizing the GSP Plus facility.

## Waste and Scrape Potential Product:

The third sub group product identified as potential product is waste and scrap of silver and other metal which is used in manufacturing the Jewelry and other articles. Due to insufficient facilities and poor infrastructure, the waste and scrap of silver and other material is also never utilized properly. Historically, Pakistan's export of waste and scrap have remained below $1million.

## Export Trend of Waste and Scrap of Silver:

*Figure 21: Export Trend of Waste & Scrap*

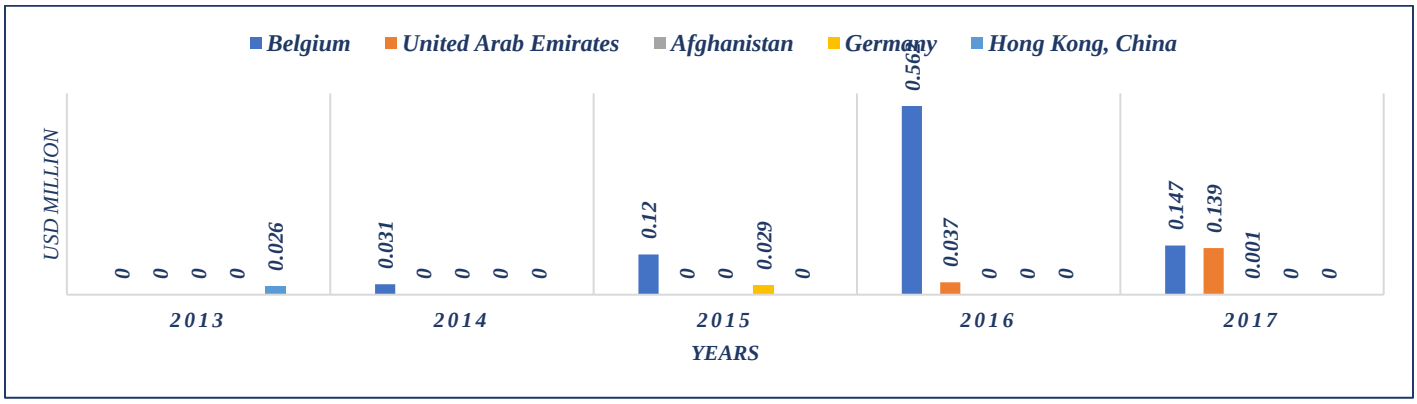



*Source: Trade map*

The listed graph presents the contrast of world demand for the scrapped items and Pakistan export to the world. The five-year trend reflects the huge gap between the aggregate demand and the export of Pakistan. Therefore, the blue column is rising year by year whereas the exports of Pakistan are on declining path.

## Major Export Destinations of Waste and Scrap of Silver:

*Figure 22: Major Export Destinations of Waste and Scrap*

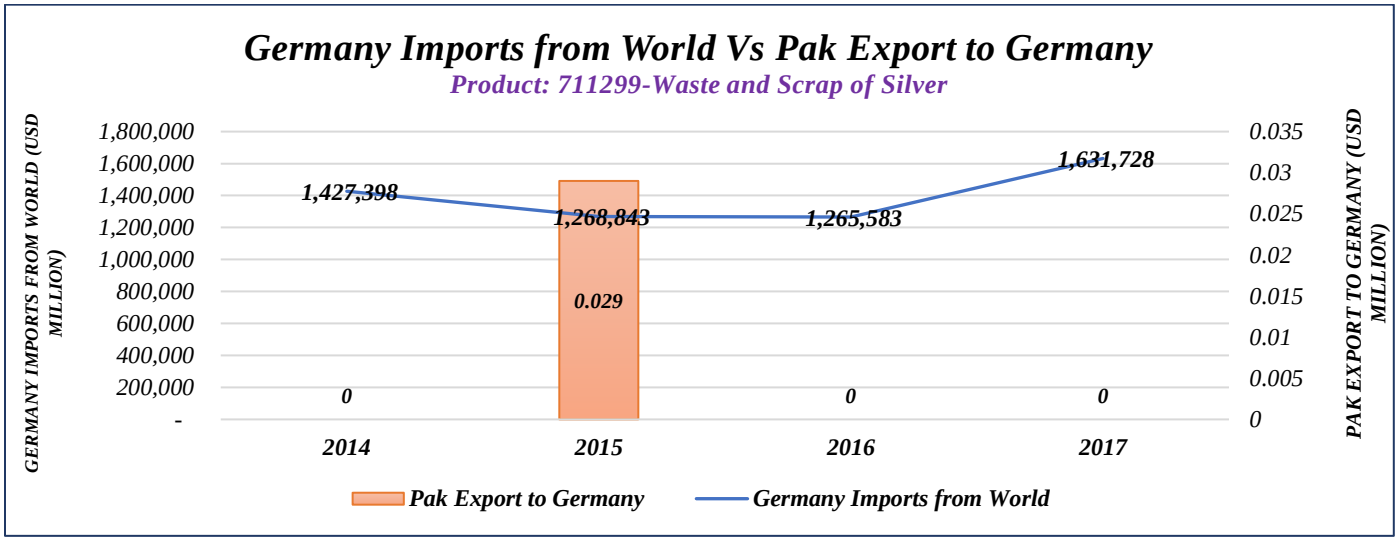



*Source: Trade map*

The above graph presents the major export destinations for the product waste and scrap exported by Pakistan in the last five years. The overall trend reflects that Belgium remained the top export destination for the product waste and scrap exported by Pakistan.

## Potential Markets for Waste and Scrap of Silver:

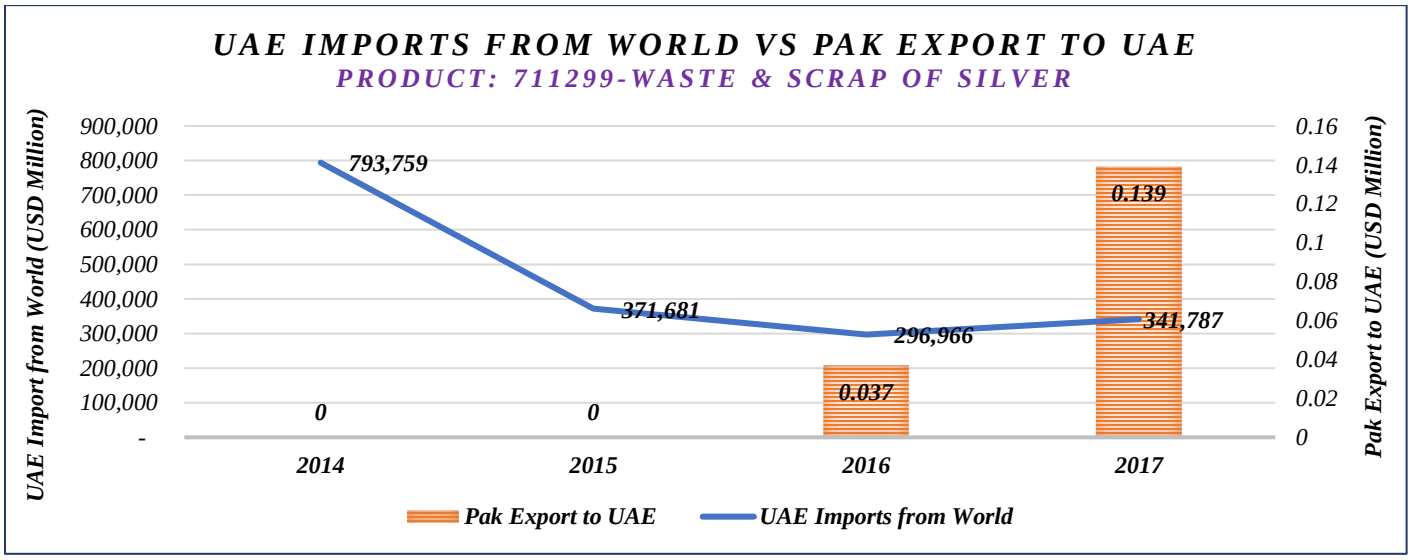
*Figure 23: Potential Market Germany for Waste and Scrap*




*Source: Trade map*

For waste and scrap of silver, Germany is considered as the high-end market with rising import. Pakistan export of waste and scrap was quite low in 2015. But after then there is a zero export of waste and scrap to Germany. As Germany is a part of EU and there is an opportunity for Pakistan to increase the export by utilizing the GSP plus facility.

*Figure 24: Potential Market UAE for Waste and Scrap*




*Source: Trade map*

The combo graph presents the contrast of UAE import from world and Pakistan export to UAE. The blue trend line indicates that there is a volatility in the import of UAE but still there is a significant import value which compliment the window of opportunity for the enhancement of Pakistan's export to UAE.

## Strategies of Major Supplying Market of Gems & Jewelry:

There are three major supplying markets to world identified in terms of their export values. This section of the report will describe the sector specific strategies of these markets in order to provide the best practices in the sector for Pakistan. In addition to this, the competitor's section is replaced with this because of low export value of Pakistan. Therefore, the leading suppliers of the world are the best example to learn and replicate those strategies in order to become competitive in the international market. In addition to this, the domestic and international strategies of the below major listed market are penned down.

- **China**
- **India**

### China - Strategy:

China has well established history of Gems and Jewelry where gold and silver have been used for decorative purpose. The history eminent event traced from the Ming and Qing dynasties (1368-1912) when precious metal art reached its peak. Since then the use of gems and jewelry has become a tradition for Chinese. Currently, China has many small-scale manufacturers with royal studios and modern workshops. The most manufacturing centers are based in Guangdong province. Over 2,000 companies are located in Shenzhen. Furthermore, Chinese market is based on value addition.

- The three most important are the Jewelry Industry Nomenclature Standard (GB/T 16552-2010), the Gem Identification Standard (GB/T 16553-2010), and the Diamond Grading Standard (GB/T 16554-2010). These standards apply to all labs across the country.
- China is moving from a low-cost manufacturing model to one with a highly skilled workforce and state-of-the-art technology such as laser sawing for diamonds, computer-aided diamond cut planning, highly precise robotic cutting for colored stones, and vacuum-casting in platinum.
- China has two specialized programs of trainings. One is professional training program which include modern certificate training programs. The other is Gemology Certificates and Degree Programs.
- The superb craftsmanship, technical innovation and unique designs have made China a leading exporter of Gems and Jewelry among global exporters.
- China has made investments in Africa region to secure the supply of raw material as China has not enough supply to compliment the demand. Therefore, extension of supply of raw material is the requirement of China.
- Extensive branding and consumer preferences in local market has allowed the Chinese manufacturers to establish international brands include BATAR, XINGGUANGDA and LORENZO JEWELRY INTERNATIONAL[4].

[4] https://www.gia.edu/gems-gemology/spring-2014-lucas-chinese-gem-industry#item-8

## India – Strategy:

India's Gems and Jewelry sector is one of the world's largest sector which is almost contributing 29% to the world's Jewelry consumption. The sector is home to 300,000 gems and jewelry players. The market size is about $60billion as of 2017 and expected to cross $100billion in next three to five years. It represents almost 15.71% of the total merchandise exports of India. India is considered as a key player in the sector. In addition to this, the export destination of India includes UAE, USA, Singapore, Hong Kong and Latin America.

- Since 2000, the foreign direct investment in the sector has crossed almost $1.11billion as of 2017 which shows the potential in the sector. Apart from this local companies are also investing in the sector.
- From a demand perspective, India is the second largest consumer of gems and jewelry which give real push to the domestic sector.
- The Government of India has permitted 100% FDI under the automatic route in this sector.
- The Government of India has levied 3 per cent goods and services tax (GST) on gold jewelry, silver jewelry and processed diamonds. Whereas 0.25 per cent GST is levied on rough diamonds.
- Indian International Jewelry Show held every year. In 2018, the deals of worth $1billion dollar made during the show.
- PC, PNJ and Popely and sons are introducing a Virtual-Reality experience for their customers. The customers will have to wear VR headsets through which they can select their desired design and order online.
- The Gems and Jewelry Promotion Council (GJPC) has signed an MOU with Maharashtra Industrial Development Corporation (MIDC) to build India's largest jewelry park in at Ghansoli in Navi-Mumbai on a 25 acres land with about more than 5000 jewelry units of various sizes ranging from 500-10,000 square feet. The overall investment of Rs 13,500 crore (US$ 2.09 billion)[5].

# SWOT Analysis:

## Strengths:

- Pakistan has rich deposits of gemstones.
- Historical manufacturing tradition exist which is due to the rising local demand.
- Natural resources of precious and semi-precious gemstones.
- Availability of low-cost labour in the sector help in producing low-cost products.

## Weakness:

- Factors including lack of appropriate skills, vested interest, regulatory bottlenecks, technological limitation and so forth, have been responsible for hindering the efforts of new investors to make any significant progress in this regard.
- Archaic tools and a lack of investment in infrastructure and techniques are hampering efforts to transform the area into a significant player in the gem industry.

[5] https://www.ibef.org/industry/gems-and-jewellery-presentation

- Mining is done manually or by small blasts—and we lose 40 to 50 percent of the value of the stones.
- The current approach is erratic and while the region's rubies are sought after due to their garnet color, the stones extracted are of irregular quality.

## Opportunities:

- Expanding domestic and international demand is an opportunity for the sector growth.
- The sector has potential for Foreign Direct Investment which will impact on sector development and its competitiveness.
- Ideal geographical location, especially presence among the major exporters of gemstones in the world China and India. This opportunity can further help in strengthening the value chain.
- Untapped international markets mentioned as potential market in the earlier section of the report. Increase in supply after quality improvement may help Pakistan to earn handsome export value.

## Threats:

- Many gems are sold on informally and processed in Thailand or India which are hampering the productivity and growth of the sector.
- private firms are discouraged by the very rugged terrain and proximity to the Line of Control (LoC), the de facto border with India, where cross-border firings and scuffles are frequent.
- Even the major international mining companies are reluctant to invest in Azad Kashmir due to the risk of conflict on the border.
- Smuggling of gemstones through border areas actually denting the sector revenue overall.
- Established world markets barriers and absence of trade agreements in certain markets also left space for the competitors.

## Conclusion:

The comprehensive analysis of the “Gems and Jewelry sector” suggests that the sector is suffering from inadequate infrastructure and facilities. In addition to this, from mining to finished item the sector has lack of competitiveness. Therefore, the autopsy of the report guides that the sector needs serious attention and strategic interventions in order to make it viable and major contributor to the economy. The potential products are almost raw form or intermediary products which do not earn handsome export value. In this regard, it is suggested that improvement of value chain and the value addition is necessary in order to become competitive in the international market. Furthermore, on the basis of the following recommendations this sector can be improved.

## Recommendations:

- Recommendations for Geological Survey of the Baluchistan and KPK.
- Introduction of Modern Technology and Methods of Mining.
- Establishment of Gems Trading House/Bureau at Karachi, Peshawar and Quetta.
- Establishment of Cutting Centers in Peshawar, Karachi and Lahore.
- Developing Training Facilities in the Cutting, Gemology, Designing and Manufacturing.
- Quality Control - Hallmarking and Assaying Facilities as well as Gem labs for Certification.
- Marketing and Branding Initiatives, i.e., domestic market trend surveys,
- Website development, policy/regulatory changes to improve enabling environment for exports, seminars and Exhibitions.
- Development of Infrastructure i.e. logistics, financial, services, insurance and MIS system.
- The long-awaited Dazzle Park needs to be established and facilitate the sector with all modern facilities.
- Encourage foreign investors to invest in the sector. Especially technical assistance, trainings and professional programs for the businessman through international coordination is a dire need of the time in order to make the sector more competitive.

Effective coordination between public and private sector is inevitable in order to strengthen this sector. The strong coordination among the following institutes is inevitable in order to strengthen the sector.

- APGMJA/APCEA.
- GGIP.
- AKRSP.
- NAGMA & BGA.
- TDAP (Ministry of Commerce & Trade).
- SMEDA (Ministry of Industries, Production & Special Initiatives).
- Ministry of Petroleum & Natural Resources.
- PCSIR (Ministry of Science & Technology).
- Geological Survey of Pakistan.
- HR Training Institutes: PSFD, BNU, GGIP, Provincial Vocational Training Institutes, etc.

**Branding/Marketing:**

- To establish Pakistan's gem and jewelry companies as world-class jewelry supplier.
- Branding Sub-Strategy:
- Re-position Pakistan initially as low volume, high value, competitively priced supplier.
- Develop linkages with internationally known institutions (GIA, GIT) and associations (ICA, CIBJO) to transfer their reputation power onto the Pakistan value proposition.
- PAKISTAN-THE BRAND: Umbrella country campaign at International Trade Shows to build awareness about Pakistan’s Gems & Jewelry industry.
- Develop training, quality assurances (hallmarking, certification) and international market knowledge to develop higher margin market opportunities in local and international markets.
- Domestic Market Surveys.

- Pakistan Gems & jewelry Introductory Brochure (in progress).
- Detailed Documentary about Gems & jewelry Pakistan.
- Pakistan Gems & jewelry Website (in progress).

**Measures for a Conducive Business Environment:**

- Review of Taxation Structure to Remove Trade Barriers and Encourage New Investment, i.e., industry be given zero rated status.
- Import and selling of gold through banks.
- Policy for import/export of jewelry manufactured from metals other than gold.
- Entitlement against sales made on foreign credit cards.
- Improvements in Secure Transportation Logistics through engaging international companies such as Securicor, Brinks, etc. and PIA.
- Special Lending Schemes and Funding for Introduction of Technology Intensive Designing/Manufacturing[6].

**Establish Gem identification and Certification Labs:**

Due to lack of adequate gem identification facilities, there is limited understanding of gemstones and their properties often leading to underselling of precious stones as well as lack of buyer confidence. To improve upon the quality of the industry, introduction of standards in the form certification of gems is essential. Currently, there are four gem identification labs in Pakistan: GGIP located in Peshawar, KPK, two in Karachi and one in Islamabad. GGIP and the one in Islamabad do not issue certificates. According to industry sources these labs have limited identification capacity.

The strategy calls for setting up gem identification and certification labs to provide international scientific standards of gem testing and identification. The labs will perform the following functions:

- Identification of new colored gemstones and provide examination reports;
- Testing and certification;
- Grading reports for diamonds (possibly to be implemented at a later stage as the need is created).

**Develop Branding Strategy**

The market in Pakistan is driven by 22 kt wedding jewelry irrespective of social class and income level. Studded with colored stones, Pakistani designs are distinctly different from Indian offerings and desired by Pakistani and Indian expatriate markets alike. As the market is mainly driven by wedding jewelry and is based on established retail relationships, local manufacturers and retailers invest very little on branding and marketing.

[6] *https://smeda.org/index.php?option=com_content&view=article&id=62:gems-a-jewellery-sector&catid=40*

**Gemstone Research Swiss lab:**

- GRS Gem Research Swiss lab AG is a private independent gemological research laboratory, specializing in the determination of origin and authenticity reports for ruby, sapphire and emerald plus other important colored gems including spinel, tourmaline, garnet and jade. In this regard, Pakistan need to join hands with GRS in order to develop a laboratory on the same standards with the help of foreign ad and the beneficiaries.

# Appendix:

## Pak Export to World:

| Pakistan's Export to World | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Product: 71 Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad ... | | | | | | | | | | | USD Million |
| Product code | Product label | World's imports from world | | | | | Pakistan's exports to world | | | | |
| | | 2013 | 2014 | 2015 | 2016 | 2017 | 2013 | 2014 | 2015 | 2016 | 2017 |
| 'TOTAL | All products | 18872868.79 | 18875498.2 | 16543097.87 | 16036539.52 | 17788101.03 | 25120.883 | 24722.182 | 22089.018 | 20533.793 | 21877.787 |
| '71 | Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad ... | 727806.991 | 616807.056 | 610037.319 | 653622.941 | 654952.108 | 437.267 | 127.451 | 19.011 | 17.622 | 23.775 |

Source: Trade map

## Gemstones Potential Export of Pakistan:

| Existing and potential trade between Pakistan and World | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Product group: Gems | | | | | | | | | | | | USD Million | |
| Product code | Product label | World's imports from world | | | | | Pakistan's exports to world | | | | | Potential | |
| | | 2013 | 2014 | 2015 | 2016 | 2017 | 2013 | 2014 | 2015 | 2016 | 2017 | 2013 | 2017 |
| | Gems | 12562.647 | 36122.217 | 14486.327 | 13388.415 | 11648.969 | 5.268 | 8.614 | 5.444 | 4.177 | 3.329 | | |
| '710310 | Precious stones and semi-precious stones, unworked or simply sawn or roughly shaped, whether ... | 1242.085 | 1276.418 | 775.51 | 1175.752 | 1319.805 | 4.798 | 7.665 | 4.463 | 3.126 | 2.733 | Potential | Potential |
| '711620 | Articles of precious or semi-precious stones "natural, synthetic or reconstructed", n.e.s. | 1920.724 | 2088.76 | 1714.067 | 1318.088 | 1246.525 | 0.213 | 0.154 | 0.231 | 0.737 | 0.313 | None | Potential |

Source: Trade map

## Major Export Destination for Precious and Semi-Precious Stones (710310):

| Major Export Destinations for Pakistani Gemstone | | | | | | | |
|---|---|---|---|---|---|---|---|
| Product: 710310 Precious stones and semi-precious stones, unworked or simply sawn or roughly shaped, whether ... | | | | | USD Million | | |
| Importers | Exported value in 2013 | Exported value in 2014 | Exported value in 2015 | Exported value in 2016 | Exported value in 2017 | %Change 2016-17 | CAGR |
| World | 4.798 | 7.665 | 4.463 | 3.126 | 2.733 | (12.57) | 0.53 |
| United States of America | 0.636 | 0.672 | 0.77 | 0.865 | 0.865 | 0.00 | (0.21) |
| China | 0.995 | 2.935 | 0.804 | 0.629 | 0.722 | 14.79 | 0.27 |
| Canada | 0.15 | 0.201 | 0.208 | 0.26 | 0.223 | (14.23) | (0.26) |
| United Kingdom | 0.267 | 0.312 | 0.298 | 0.304 | 0.209 | (31.25) | 0.20 |
| United Arab Emirates | 0.438 | 0.394 | 0.408 | 0.347 | 0.187 | (46.11) | 0.89 |

Source: Trade map

## Potential Markets of Precious and Semi-Precious Stones (710310):

| Potential Markets for Product Exported by Pakistan | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Product: 710310 Precious stones and semi-precious stones, unworked or simply sawn or roughly shaped, whether ... | | | | | | | | | | USD Million |
| Import from World | | | | | | Pakistan's Export | | | | |
| Importers | 2014 | 2015 | 2016 | 2017 | % Change 2016-17 | 2014 | 2015 | 2016 | 2017 | % Change 2016-17 |
| China | 756,562 | 83,723 | 75,895 | 97,277 | 28.17 | 2.935 | 0.804 | 0.629 | 0.722 | 14.79 |
| United States of America | 25,655 | 44,069 | 50,130 | 33,439 | (33.30) | 0.672 | 0.77 | 0.865 | 0.865 | 0.00 |
| United Arab Emirates | 23,932 | 19,398 | 19,580 | 12,004 | (38.69) | 0.394 | 0.408 | 0.347 | 0.187 | (46.11) |

Source: Trade map

## Major Export Destinations of Article of Precious or Semi-Precious Stones (711620):

| Major Export Destinations of Pakistan for 711620 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Product: 711620 Articles of precious or semi-precious stones "natural, synthetic or reconstructed", n.e.s. | | | | | | USD Million | |
| Importers | Exported value in 2013 | Exported value in 2014 | Exported value in 2015 | Exported value in 2016 | Exported value in 2017 | % Change | CAGR |
| World | 0.213 | 0.154 | 0.231 | 0.737 | 0.313 | (57.53) | (0.25) |
| India | 0.091 | 0 | 0 | 0.333 | 0.201 | (39.64) | (0.45) |
| China | 0 | 0.011 | 0.198 | 0.366 | 0.06 | (83.61) | #DIV/0! |
| Spain | 0.001 | 0 | 0 | 0.001 | 0.012 | 1100.00 | (0.84) |
| United States of America | 0.083 | 0.017 | 0.009 | 0.005 | 0.009 | 80.00 | 4.29 |
| Germany | 0.012 | 0.022 | 0.008 | 0.01 | 0.008 | (20.00) | 0.36 |

Source: Trade map

## Potential Markets of Articles of Precious or Semi-Precious Stones (711620):

| Potential Markets for Product Exported by Pakistan | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Product: 711620 Articles of precious or semi-precious stones "natural, synthetic or reconstructed", n.e.s. | | | | | | | | | | |
| Import from World | | | | | | Pakistan's Export | | | | |
| Importers | 2014 | 2015 | 2016 | 2017 | % Change 2016-17 | 2014 | 2015 | 2016 | 2017 | % Change 2016-17 |
| United States of America | 693,482 | 576,723 | 588,351 | 629,787 | 7.04 | 0.017 | 0.009 | 0.005 | 0.009 | 80.00 |
| United Kingdom | 34,447 | 43,425 | 40,465 | 43,115 | 6.55 | 0.013 | 0.003 | 0.003 | 0.003 | 0.00 |
| Canada | 20,148 | 26,780 | 34,024 | 33,049 | (2.87) | 0 | 0 | 0 | 0.004 | - |

Source: Trade map

## Jewelry Potential Products:

| Existing and potential trade between Pakistan and World | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Product group: Jewelry | | | | | | | | | | | USD Million | | |
| Product code | Product label | World's imports from world | | | | | Pakistan's exports to world | | | | | Potential | |
| | | 2013 | 2014 | 2015 | 2016 | 2017 | 2013 | 2014 | 2015 | 2016 | 2017 | 2013 | 2017 |
| | Jewelry | 77821.453 | 82431.705 | 76925.52 | 76481.458 | 81404.45 | 431.635 | 118.074 | 13.191 | 12609 | 19.935 | | |
| '711319 | Articles of jewellery and parts thereof, of precious metal other than silver, whether or not ... | 61198.555 | 64651.9 | 60429.422 | 59345.545 | 64005.297 | 400.796 | 105.218 | 5.744 | 7.126 | 4.362 | Potential | Potential |
| '711510 | Catalysts in the form of wire cloth or grill, of platinum | 453.579 | 509.753 | 336.222 | 324.142 | 284.954 | 5.295 | 12.279 | 7.113 | 5.102 | 15.267 | Potential | Potential |

Source: Trade map

## Major Export Destinations – Articles of Jewelry (711319):

| Major Export Destinations of Pakistan | | | | | | | |
|---|---|---|---|---|---|---|---|
| Product: 711319 Articles of jewellery and parts thereof, of precious metal other than silver, whether or not ... | | | | | | USD Million | |
| Importers | Exported value in 2013 | Exported value in 2014 | Exported value in 2015 | Exported value in 2016 | Exported value in 2017 | % Change 2016-17 | CAGR |
| World | 400.796 | 105.218 | 5.744 | 7.126 | 4.362 | (38.79) | (0.01) |
| United States of America | 3.676 | 2.775 | 2.201 | 3.024 | 1.518 | (49.80) | (0.31) |
| United Kingdom | 2.424 | 1.062 | 0.466 | 0.529 | 1.159 | 119.09 | (0.36) |
| United Arab Emirates | 392.486 | 98.801 | 1.809 | 1.913 | 1.084 | (43.34) | (0.00) |
| Canada | 1.803 | 2.282 | 0.978 | 1.372 | 5.91 | 330.76 | (2.46) |
| South Africa | 0 | 0 | 0 | 0 | 0.008 | - | - |

Source: Trade map

## Potential Markets – Articles of Jewelry (711319):

| Potential Markets for Product Exported by Pakistan | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Product: 711319 Articles of jewellery and parts thereof, of precious metal other than silver, whether or not … | | | | | | | | | | |
| Import from World | | | | | | Pakistan's Export | | | | |
| Importers | 2014 | 2015 | 2016 | 2017 | % Change 2016-17 | 2014 | 2015 | 2016 | 2017 | % Change 2016-17 |
| United States of America | 5,555,897 | 5,803,540 | 7,005,163 | 7,472,882 | 6.68 | 2.775 | 2.201 | 3.024 | 1.518 | (49.80) |
| United Arab Emirates | 9,512,700 | 7,062,745 | 6,702,006 | 5,343,493 | (20.27) | 98.801 | 1.809 | 1.913 | 1.084 | (43.34) |
| Singapore | 3,663,660 | 3,108,821 | 3,122,867 | 2,566,318 | (17.82) | 0.012 | 0.009 | 0 | 0 | - |

Source: Trade map

## Major Export Destinations – Catalyst in the form of Wire (711510):

| List of importing markets for a product exported by Pakistan | | | | | | | |
|---|---|---|---|---|---|---|---|
| Product: 711510 Catalysts in the form of wire cloth or grill, of platinum | | | | | | USD Million | |
| Importers | Exported value in 2013 | Exported value in 2014 | Exported value in 2015 | Exported value in 2016 | Exported value in 2017 | % Change 2016-17 | CAGR |
| Germany | 5.255 | 5.412 | 4.551 | 4.018 | 9.076 | 125.88 | (1.30) |
| United Kingdom | 0.039 | 6.867 | 2.561 | 1.084 | 6.191 | 471.13 | (119.06) |

Source: Trade map

## Potential Markets – Catalyst in the form of Wire (711510):

| Potential Markets for Product Exported by Pakistan | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Product: 711510 Catalysts in the form of wire cloth or grill, of platinum | | | | | | | | | | |
| Import from World | | | | | | Pakistan's Export | | | | |
| Importers | 2014 | 2015 | 2016 | 2017 | % Change 2016-17 | 2014 | 2015 | 2016 | 2017 | % Change 2016-17 |
| Germany | 108,629 | 48,225 | 62,630 | 40,640 | (35.11) | 5.412 | 4.551 | 4.018 | 1.518 | (62.22) |
| United Kingdom | 17,293 | 13,061 | 5,958 | 12,896 | 116.45 | 6.867 | 2.561 | 1.084 | 6.191 | 471.13 |
| Singapore | 2,236 | 3,343 | 1,016 | 7,896 | 677.17 | 0 | 0 | 0 | 0 | - |

Source: Trade map

## Major Export Destinations – Waste and Scrap of Silver (711299):

| List of importing markets for a product group exported by Pakistan | | | | | | | |
|---|---|---|---|---|---|---|---|
| Product group: Waste | | | | | | USD Million | |
| Importers | Exported value in 2013 | Exported value in 2014 | Exported value in 2015 | Exported value in 2016 | Exported value in 2017 | % Change 2016-17 | CAGR |
| Belgium | 0 | 0.031 | 0.12 | 0.562 | 0.147 | (73.84) | - |
| United Arab Emirates | 0 | 0 | 0 | 0.037 | 0.139 | 275.68 | - |
| Afghanistan | 0 | 0 | 0 | 0 | 0.001 | - | - |
| Germany | 0 | 0 | 0.029 | 0 | 0 | - | - |
| Hong Kong, China | 0.026 | 0 | 0 | 0 | 0 | - | - |

Source: Trade map

## Potential Markets – Waste and Scrap of Silver (711299):

| Potential Markets for Product Exported by Pakistan | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Product: 711299 Waste and scrap of silver, incl. metal clad with silver, and other waste and scrap containing … | | | | | | | | | | USD Million |
| Import from World | | | | | | Pakistan's Export | | | | |
| Importers | 2014 | 2015 | 2016 | 2017 | % Change 2016-17 | 2014 | 2015 | 2016 | 2017 | % Change 2016-17 |
| Germany | 1,427,398 | 1,268,843 | 1,265,583 | 1,631,728 | 28.93 | 0 | 0.029 | 0 | 0 | - |
| United Arab Emirates | 793,759 | 371,681 | 296,966 | 341,787 | 15.09 | 0 | 0 | 0.037 | 0.139 | 275.68 |

Source: Trade map