

Crunching Situation of Indian Diamond Industry Due to the Global Recession and Volatile Behavior of US Dollar (A Study of Diamond Industry of Surat, Gujarat)

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Abstract – *The Surat city of Gujarat is a leading diamond cutting and polishing center in the world. Though it is operated in an unorganized way, but provides employment to large mass of the society and generates valuable FOREX for the nation. Due to the appreciation of US \$ and recession in major parts of the world, the industry has been affected to a great extent and because of the same, plenty of changes in work practices introduced by the owners to synchronize the business with global tune. The economy of the Surat city is highly reliant on the diamond industry; the major work force employed in diamond industry is from Saurashtra. Due to the US\$ appreciation and global recession, this diamond industry has been affected to a great extent. The impacts of the global factors have positive and negative effect and the same has been studied in this research work.*

Keywords: *Business Environment, Diamond, International Market, Surat.*

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1. INTRODUCTION

Surat is a port city in the Indian state of Gujarat and one of the leading centers for diamond cutting and polishing in the world (Agnihotri and Patel, 2008). The city is situated on the left bank of the Tapti River, 14 miles from its mouth (Gandhi, 2005; Chauhan et al., 2013). Local traditions fix the establishment of the modern city in the last year of the fifteenth century (Parveen, 2014). Portuguese traveler Barbosa has explained Surat as one of the crucial seaport of Western India in 1514, as the Cambay harbor had began to silt up. Surat as a city draws its historical importance from the era of Mahabharat (Gandhi, 2005) and Moghul period (Chaudhry, 2002), caught up with momentum of moving towards industrial growth unprecedented in its history (Parveen, 2014).

During the reigns of Mughal emperors Akbar, Jahangir and Shah Jahan it rose to be the chief commercial city of India (Gandhi, 2005; Parveen, 2014). Till the arrival of Britishers in 1612, Portuguese were the undisputed masters of trade carried out through Surat seaport. Due to the frequent attacks from Shivaji and Bombay was ceded to the Company in 1668; Surat had received a fatal blow and lost its importance against the Bombay. Surat became a busy commercial center by the end of 19th century (Gandhi, 2005). In present time as well, it is one the biggest small-scale industrial center of South Gujarat with a valuable contribution in FOREX earning for our nation (Brief Industrial Profile, Surat district, 2011).

The major industries, which are located in and around Surat, are textile, diamond, Jari, chemicals

and fertilizers, steel plant, pulp and paper etc. But mainly the business economy of Surat relies on its traditional businesses like, Textile, diamond and Jari (Chaudhry, 2002; Gandhi, 2005). All these three industries are typical in nature and mainly run by the entrepreneurs on a micro, small and medium enterprises (MSME) level, some are operating on cottage level too. However traditional in nature but they provide employment to more than 20-25 Lacs people of city directly or indirectly (Chaudhry, 2002; Gandhi, 2005). Surat is one among the fastest developing metropolitan areas of the world and is 9th largest metropolitan city of India (Zanzmera, 2012). Surat has one of its important economic base of diamond cutting and polishing (Mahadevia and Shah, 2010; Gandhi, 2005). After textile, diamond industry is another backbone of the city for its economic growth (Makvana, 2014; Zanzmera, 2012, Mehta, 2016; Patel, 2016). As far as industrialization and economic development is concerned, Surat is one of the important manufacturing centers of in India (Gandhi, 2005; Menning, 1997; Purani, 2000).

After 1960s, the diamond cutting and polishing work has witnessed the real thunder current in the business (Gandhi, 2005; Miranda, 1999), which got the momentum in 1980s and had attracted young workforce from Saurashtra region (Gandhi, 2005; Mahadevia and Shah, 2010) and seen a rapid growth in post globalization period (Gandhi, 2005; Gujarat Plus, 2011). Uncut diamonds were imported from the mines of Africa, Australia, Russia and Canada (Gandhi, 2005; Goti and Nayak, 2015; Hirway, 2009; Miranda, 1999) and the Surti Patels' - the original artisans - used their expertise in cutting and polishing the diamonds (Gandhi, 2005; Miranda, 1999). The growth of the diamond, gem and jewellery industries continued due to the boom in the export sector (Miranda, 1999). Nine out of ten diamonds produced in the world are from the Surat city (Gandhi, 2005; Miranda, 1999).

The quick growth of diamond industry in Surat is mainly due to the decentralized small-scale household based industries, which are deploying Lacs of migrant workers of Saurashtra (Miranda, 1999; Purani, 2000). Somewhere around 20 Lakhs people of the city are directly or indirectly associated with the diamond industry and majority of them come from Kathiyawad-Saurashtra and belongs to Patel community (Hirway, 2009; Gandhi, 2005; Goti and Nayak, 2015). Apart from this, other communities like Koli, Patel, Vankar and Other Backward Castes (OBC), and workers from Maharashtra, Madhya Pradesh, Rajasthan, Bihar and Uttar Pradesh are also working in diamond industry of Surat (Hirway, 2009). Surat is having more than 3,000 units of MSME type for diamond cutting and polishing (Hirway, 2009).

The new 'Export Policy' was introduced in 1954 has paved the way for the growth of diamond cutting and polishing in the Surat city (Gandhi, 2005). After the

release of new economic policy in 1991, the boost power imparted to diamond industry and has bring the prosperity to the city and it led to the expansion of the diamond cutting and polishing industry, which has resulted in an initiation of movement towards the development of corporate professional and practices in business to meet the global challenges mainly in the area of managing FOREX and brand (Gandhi, 2005).

Surat witnessed extraordinary growth during the decade of nineties and millennium for diamonds processing, constraints were felt due to the absence of local marketing facilities, finished products manufactured in Surat used to be sent to Mumbai for sale and exports as well as processing (Chaudhary, 2002; Gandhi, 2005; Mahadevia and Shah, 2010). Due to the unavailability of certain infrastructural facilities, such as diamond bourse, majority of the selling of the polished diamonds is done through Mumbai (Lee et al., 2008; Report of the task group, 2013). But in near future similar to diamond bourse of Bandra-Mumbai, a bourse will be operated in Sachin-Surat for meeting the global demand of diamond business (Lee et al., 2008; Report of the task group, 2013; Vibrant Gujarat, 2017).

The statistics available indicates that, around 45% of the population is involved in the diamond industry (Mahadevia and Shah, 2010; Vibrant Gujarat, 2017). The diamond industry has brought an influx of wealth into the city. Due to the availability of cheap labor and support of state government, Surat has become the manufacturing center, where as Mumbai has more focused on a diamond trading center (Gandhi, 2005; Lee et al., 2008; Hirway, 2009; Report of the task group, 2013)".

Business statistics of Surat revealed its national and global importance due to the diamond industry is as follows (Surat Municipal Corporation, 2018) :

- 42 % of the world's total rough diamond cutting and polishing,
- 70 % of the nation's total rough diamond cutting and polishing,
- 40 % of the nation's total diamond exports

In the year of 2005, Surat was reported to have a share of around 92% in world's cut and polished diamonds (Gandhi, 2005; Hirway, 2009). Also it is stated that, 8 out of 10 diamonds of the world are produced in Surat. Based on the data provided by Surat Diamond Association, there are around 30 big units, 75 medium size units and 600 small size units where entire process of diamond cutting and polishing carried out.

The slow-down of diamond exports from three years (2010 to 2013) is mainly due to the following reasons:

- Value of US \$ appreciate against Indian Rupees since last 10 years
- There was a great recession due to the credit crisis (2007-08) due to the bad debts in housing sector of USA, which has a great effect on economies of USA and Europe. (Great Recession, 2016). Because of great recession, following were the major effects :
 - o Credit crunch led to a fall in bank lending, due to shortage of liquidity.
 - o Fall in consumer and business confidence resulting from the financial instability.
 - o Fall in exports from global recession.
 - o Fall in house prices leading to negative wealth effects.
 - o Fiscal austerity compounding the initial fall in GDP.
 - o In Europe, the single currency created additional problems because of over-valued exchange rates, and high bond yields.
- Diversion of cash credit facilities (given by banks for the purchase of rough diamonds) to real estate by the diamond industrialists (Patel, 2016). Because of this, there were multiple defaulters of banks which have deteriorated the diamond business market (Patel, 2016).

In the last 25~30 years, with the joint efforts of Palanpuri Jains and Kathiyawadi Patels, more than sixty percent of the business is in the hand of Gujaratis (Divya Bhaskar, 2005a). Recently, the newspapers and magazines of Europe have considered Surat as a 'Diamond Center' of the world instead of 'Antwerp', because more than seventy percent of the world diamonds are processed in Surat (Divya Bhaskar, 2005b; Gujaratmitra, 2005).

2. DIAMOND INDUSTRY IN SURAT – INDIA

Diamonds are available in India since last 3000 years (8 B.C.). In 16th and 17th Century, diamond mines of Andhra Pradesh and Madhya Pradesh were under full fledged production. Till the 17th Century, Golconda diamond mines of Andhra Pradesh were the only place to get the diamonds in the world (Varsani, 1998; Gandhi, 2005) Once upon a time India had a monopoly in rough diamond production

and the best diamonds were available from Indian mines (Diamond Samrajya, 1997). The qualities of Indian diamonds were of very high, it had a transparency like water and brilliancy and firing was eye catchy (Gujaratmitra, 2002). At present most of the rough diamond mines of India have been closed down and the present supply of rough diamonds is from Africa, Canada, Russia, and Australia (Business Today, 2004). The major export of cut and polished diamonds from India is to USA, Hong Kong, Belgium and Japan. Out of this, USA and Hong Kong are major markets for India. After the incident of September 11, 2001 of World Trade Center attack, there was a noticeable reduction in exports from India (Gujarat Samachar, 2001). This particular incident indicates the volatility associated with this business.

Since a longtime, it has been observed that, the diamond trade is facing the problem of recession. Detailed analysis of the trade of past few years suggest that, many of the small and medium level units are facing problems of liquidity and survival due to the over production of cut and polished diamonds (due to the usage of ultra modern technology in manufacturing process), pile up of inventory of finished goods and restricted credit facilities by banks (Gandhi, 2005; Hirway, 2009; Patel, 2016). The advanced technology has changed the whole face of the cottage level industry to the ultra-modern industry (Gandhi, 2005). During this period, the cottage type factories moved from residential facilities of old city [Mahidharpura, Manchharpura, Saiyedpura] to its outskirts [Varachha Road, Ved Road and Katargam] of Surat and to Ahmedabad and Saurashtra region with an aim to have state-of-the art facilities for manufacturing (Gandhi, 2005).

The decade of post LPG and WTO regimes can be considered as an era of professional revolution in diamond industry (Gandhi, 2005). The globalization of earlier era has started portraying its impact on this industry; resulted into the development of the 'state-of-art-factory' factory. These factories are designed as per the statutory norms, labor laws, and factory acts and rules, which has changed the 'Chawl' type 'Karkhana' to a sophisticated business houses. Another reason for implementation of such statutory norms in units the policy developed by rough diamonds suppliers, i.e. Debeers and RioTinto.

However, traditional in nature but the diamond industry provides employment to more than 20~25 Lacs people of the city directly or indirectly and generating valuable FOREX for our nations through exports of diamonds.

From the above discussions, it can be concluded that though unorganized nature carrying by the diamond industry of Surat, it is one of the nervous system of the Surat's economy and provides valuable employment to large mass of people and

generate valuable FOREX for the nation. Hence in this context it is essential to study the impact of US Dollar and Economic Recession in Europe, USA and other part of the world.

3. RESEARCH METHODOLOGY

The present research is exploratory in nature and no attempt has been made to establish the relationship against US \$ value, recession and local diamond industry. Due to the exploratory research, formulation of hypotheses is not required & in the light the objectives of the study, certain questions which are specific in nature have been investigated to understand the scenario in more detail. However, in view of deliberating the more details, a hypothesis of *“appreciation of US \$ and recession in world and their impact on the diamond industry of Surat”* has been assessed. Also in due course of research work, some of the questions were framed to test the diamond sector problems. Here data of secondary nature collected from various newspapers, magazines and journals.

3.1 Objectives of the Present Study

- i. To examine the present situation in the context of US \$ appreciation and global recession on the working conditions, financial rearrangements, and business performance of the local diamond industry, i.e. to check the impact of the global economic factors on the socio-economic level.
- ii. To find out the limitations of the diamond industry of Surat city in the context of international trade law, its management and implementations of effective measures.
- iii. To propose policy measures and remedial action plan to instruct the entrepreneurs in the context of challenges from the domains of various global factors, such as, international trade, international finance and international law for protecting their business interests.

3.2 Research Questions

1. Is the local diamond industry of Surat is affected by the US \$ and recession in EU, USA and other part of the world?
2. What are the international factors which affects the local units of Diamond industry of Surat?
3. Is this diamond industry facing strategic problems in their current business?

4. What are the global business issues and prospects of this local diamond industry in Surat?
5. Whether or not this diamond industry needs to plan against such global factors?

3.3 Aim of research study:

To understand the impact of appreciation of US \$ and global economic recession on local diamond industry of Surat city and suggest suitable strategies to improve its global trade.

3.4 Main Objectives:

1. To examine the impact of appreciation of US \$ and economic recession in EU, USA and other part of the world on local diamond industry of Surat
2. To evaluate the export-import business performance of the diamond industry and its socio-economic impact on Surat city.
3. To suggest suitable steps to combat against such global environmental forces.

3.5 Selection of Industries

For the selection of the samples in diamond industry, we have relied on the information obtained from apex nodal bodies, such as Gems & Jewellery Exports Promotion Council (GJEPC), Indian Diamond Institute (IDI) and Surat Diamond Association (SDA). Accordingly a universe for this study has been identified containing 57 numbers of diamond processing units which are being affected by the appreciation of US \$ and recession in major developing nations. Out of this universe, 15 % samples has been taken, comprises of 09 [NINE] diamond units. For better clarity to explore the study and evaluate the effect, they are further classified in small units, medium units and large units. So the samples comprises of 03 number of small diamond units, 03 number of medium diamond units, 03 number of large diamond units. Primary data has been collected through questionnaire, personal interview & discussion. The gathered data has been processed to develop information through various research tools.

4. DATA ANALYSIS, INFERENCES, AND DISCUSSIONS

Theoretical Framework:

In today's global environment the businesses are heavily relying on four basic elements, such as social, economical, environmental and political (Makvana, 2014). Out of these elements,

economical aspects are vital for the success of the business in the era of globalization. In this era of globalization, the economical aspects of business are influenced by foreign trade, volatility of currency and business opportunities across the globe. To get the idea of the "impact of appreciation of US \$ value against Indian rupees and economic recession in EU, USA and other part of the world on the performance of export – import business of local diamond industry of Surat city, detailed survey based on the questionnaire was carried out to pull out the specify.

Data Analysis and inferences drawn:

- The collected data indicates that the awareness of foreign trade business and its legal regime among diamond industrialist is good. Based on the information collected during the survey, it has been found that due to the nature of diamond business which is mainly exports oriented; the diamond industrialists are having higher awareness for managing the foreign trade business.
- In post globalization, 78% of the companies have adopted a practice to obtain certificate (in terms of 4 'C', i.e. carat, color, clarity and cut) from Gemological Institute of America (GIA) and International Gemological Institute (IGI) for big size diamonds, i.e. pointer size cut and polished diamonds in view of the need of international trade.
- 22% of diamond companies which have no practice for such certificate for their cut and polished diamonds are in a business of smaller size diamonds and such diamonds are accepted in international market based on the credibility of the sellers.
- During the survey, diamond industrialists have informed that such certifications are vital tools for handling the trade related disputes. Also such certifications are a part of international sales contract executed between the sellers and buyers. Such certifications are very useful in matters of arbitration also. Based on such certification, they are able to get higher prices for their products which help to our nation for earning higher FOREX.
- Before the appreciation of US \$ value, the price differentiation between Israel, Belgium and Indian suppliers was a valid reason to have a trade (Ricardian, Heckscher-Ohlin) and was beneficial to Surat based diamond units to produce the products at lower cost. Before the appreciation of US \$ value, Israel, Belgium were holding the greatest relative advantage in total factor productivity (TFP). During the survey, the importers had

revealed that after the appreciation of US \$ value, the cost of import of supporting materials and chemicals of diamond processing were almost equal to the price of the same materials available in local market. Hence to avoid the complexity of international trade, such as payments in US \$, filing of bill of entry, and clearance through customs house agent (CHA), diamond manufacturers have switched to the local market for the purchase of these materials.

- After the appreciation of US \$ value the base price of imported materials and chemicals used in diamond processing increased in India and these foreign suppliers had lost the advantage of TFP and the trade of consuming them in diamond processing has followed the Heckscher-Ohlin model and established that both the countries possess the same production function in a given industry of materials consumed in diamond processing.
- As per the process requirements of main raw-materials in diamond industry is rough diamonds. Some of the integrated units are importing gold, silver and platinum if they are in diamonds to jewelry business to meet their business requirements. For importing these raw-materials, these organizations have made trade agreements with the suppliers (here Debeers Trading Corporation for Sight Holders) for the uninterrupted supply of them. Industrialist are buying these materials through banks as an intermediate agency and using either factoring or forfeiting. The buyers of the rough diamonds are providing bank guarantee to the rough diamonds suppliers. Around 62.5 % of the units are using factoring as options where as 37.5 % of the units are using forfeiting as an option. Also they are using an option of hedging for making the payments on due date.
- The collected data indicates that diamond industry of Surat is importing raw-materials and plant & machinery from various developed countries of the world to meet their process requirements. Here Israel is one of the major suppliers of rough diamonds and diamond planner machines to diamond industry of Surat. Diamond Planner machines are mainly supplied by Israeli companies known as Sarin and OGI. From EU, mainly diamonds and microscopes are import by Surat. Belgium is another major supplier of rough diamonds to Surat. China is emerging as one of the major suppliers of plant and machinery for diamond processing is an

indication of the effect of US \$ appreciation and benefits of low cost supply to India.

- As the rough diamonds are not being produced in sufficient quantities in Indian mines; the diamond businessmen have to rely on the global rough diamonds supply. 89 % of the units import rough diamonds, 55 % of the units import spare parts and supporting chemicals to meet their process requirements. The entire diamond industry operates on informal sector in international market (Rao and Glinow, 2012).
- The diamond cluster of Surat emerged on the basis of its competitive factor conditions such as commercial acumen of Gujarati, low wages, good infrastructure and presence of Gujarati community across the major metros. The structure of the diamond industry has been changed over a period of time, and this cluster of Surat is vulnerable to higher-productivity workers in China; also facing a constraint of rough diamond supply and a temporary fall in demand as the US recession bites. During the survey, industrialist have informed that though this diamonds are processed in local industry but is highly linked with the economy of developed nations. The recession in those countries have direct relations with this industry. Import of rough diamonds in Surat is a part of global value chain. The diamond value chain comprises of mine exploration, sorting of diamonds, distribution and trading of rough diamonds, processing and trading of polished diamonds, jewellery manufacturing and retail business (Porter et al, 2007).
- The diamond industry of Surat heavily relies on the skill of its people to process diamonds, is in line with the arguments of Heckscher-Ohlin who had predicted that countries will produce relatively more of the goods that use their relatively abundant factors relatively intensively.
- The collected data indicates that around 67 % of the units of diamond industry have said that their import of raw-materials reduced due to the appreciation of US \$. The major reason behind this is cost of production. Due to the higher cost of raw-materials, they are unable to produced goods with competitive rates. The diamond industry is heavily relied on import of rough diamonds, have no other option to change the source of supply. To compensate with higher prices of rough diamonds, diamond industry have taken certain steps such as providing employment to women and fresh candidates to reduce the wage rate portion. Also they switched

over to processing of higher value goods (bigger size diamonds) to compensate the dollar appreciation.

- Around 33 % of the diamond units have said that their import is reduced by 20 % due to the appreciation of US \$. The level of reduction of import is low in diamond industry is mainly due to their heavy reliance on rough diamond imports. Around 50 % of the diamond units have said that their import of raw-materials (rough diamonds) is reduced in a range of 20 ~ 30 % and they have switched to process higher value goods. This is a major portion of the industry affected by the US \$ appreciation against Indian rupees.
- From the collected data, it has been found that around 55 % of the units of diamond industry have said that their import of plant & machinery reduced due to the appreciation of US \$. The major reason behind this is higher cost of purchase and they switched over to local machinery suppliers such as Lexus, Photon and Sahajanand. The machinery supplied by these local suppliers is at par with imported machinery and buying from them saves valuable FOREX for our nation.
- From the collected data, it can be said that around 40 % diamond units have reduced their investments in imported plant & machinery in a range of around 25 ~ 40%. There are 20 % of diamond units who have reduced their investments in imported plant & machinery in a range of 50 ~ 70 %. But interesting fact is where 40 % of the units have reduced investments of imported plant and machinery for more than 75%. This is mainly due to the switch over option available in diamond industry for local supplier. The switch over option of using local technology in manufacturing process is a mainly due to the availability of international technology in local market from local suppliers (Desai and Keller, 2002). The data has indicated that 44 % of diamond units have started buying their machinery from local market to meet their production requirements. The data indicates that for the purchase of machinery from local market, diamond units mainly purchasing the plant and machinery from Surat (66.67%), Ahmedabad (22 %) and Rajkot (22%). The chart indicates that due to the dominance of diamond industry in Gujarat, majority of the machinery suppliers are from Gujarat

- The data indicates that all the diamond units are exporting their finished goods (cut and polished diamonds) to foreign buyers. The 67% of the diamond units are having an exports share of more than 80% in their total business turnover.
- Above chart indicates that out of the units surveyed 78 % of the diamond units have reduced their production due to the appreciation in value of US \$. This reduction in production is mainly due to the increment of prices of raw-materials in the international market and because of the same their manufacturing cost increases but they are not getting that price increment benefits for their products in international market and because of the same they forced to reduce their production level. Around 67 % of the units have revealed that their payment cycle has been affected due to the appreciation in US \$. The said appreciation of US \$ has made an impact on currencies of other nations located in EU, middle-east and far-east. The exporters of Surat are exporting their products to these nations and because of the same; their payment cycle is affected, mainly due to the higher exchange rates.
- The collected data indicates that, 5.56 % of the units have experienced extension of credit period by 30 days. 16.67 % of the diamond units have revealed that, their credit period extended by 30 ~ 60 days; 67 % of the diamond units have revealed that, their credit period extended by 60 ~ 90 days; and 16.67 % of the diamond units have revealed that, their credit period extended by more than 90 days. The credit period of 60 ~ 90 days in case of diamond units is mainly due to US \$ value appreciation and recession in international market for luxury goods. The units which are facing a problem of more than 90 days of credit period are integrated units where entire manufacturing chain or all process under one roof carried out.
- The collected data indicates that due to the appreciation of US \$, 78% of the units are facing an issue of payments to be made to their suppliers. This is mainly due to the payment is being made in US \$ in international market and due to the appreciation of value of US \$, they have to pay more Indian rupees. In short run they are facing this payment of higher rupees due to no hedging made by them to safeguard their payables.
- The collected data indicates that 67 % of the units are having a system to hedge their payments against the volatility in currency. Even though the units have adopted a strategy to hedge their payments against the US \$ but they fail to exercise proper rates due to the lack of knowledge of international trade. Because of this improper hedging, the cost of their payments has been increased and their overall return on investment is reduced.
- The collected data indicates that due to the 63 % of the units have changed their product mix due to the appreciation of US \$. This is mainly due to the reduction in return on investment on capital employed. They switched over to other products and started exploring new customers in international markets. In view of maintaining the production cycle and overall profitability of the units, the manufacturers have altered their product mix. Some of the diamond units have started production of smaller size diamonds and explored new markets and new customers.
- The collected data indicates that 78 % of the owners of the units have fair ideas of managing the FOREX. But in recent time they also fail to exercise proper hedging for their receivables and payables.
- The collected data indicates that due to the recession in EU, USA and other nations, 55 % of the units have experienced a change in their customer base. During the discussion, positive aspects crystallized on the surfaces which has revealed that the units owners are considering this recession as a learning opportunity for them to explore new markets. Due to the recession, in initial period they had faced a problem of dead stock development of the finished goods. The owners have explored new markets of middle – east (56 %), south – east (33 %) and Australia & New Zealand (11%). Major exports to middle east by diamond units are bigger size diamonds, known as ‘pointers’ where as in south – east market they are exporting smaller size diamonds, such ‘star’, ‘malee’ etc. The market of middle – east also covers Turkey as a major buyer.
- From the collected data, it can be said that in view of the recession 33 % of the diamond units have reduced their man power. This step has been taken in view of managing the cost of production with an aim to supply the products at competitive rates in the market. In diamond industry, 33 % of the units have reduced their manpower up to 25 % of their strength and 67% of the units have reduced the manpower in a range of 25 ~ 50%. Apart from recession, another reason for reduction of manpower in these units are implementation of modern machinery in

units, these machinery are procured from local and international market for the meeting the process requirements. Implementation and using of modern machinery in manufacturing process is one of the step initiated by the owners to reduce the cost of production and improving the quality of finished products in long run.

- From the collected data, it can be said that to cope up with the recession and appreciation of US \$ value against Indian rupees, the owners of local diamond industry have initiated certain steps, such as reduction in wage rates (55 %), providing employment to women (56 %) in areas where less physical work demanded in manufacturing process, recruitment of fresh candidates (37 %) and out sourcing of the part of manufacturing process (26%). During the survey, it has been found that management of the units have convinced their workforce through a series of meeting for reduction in wage rates in view of the recession and appreciation of US \$ rate. Also they have informed to their staff about the exploration of new markets by them and once those markets will be fully utilized, they will restore their wage rates and difference of deduction will be given. During the survey it has been found that the women who are getting an employment in diamond industry belong to LIG groups and working with an aim to contribute to their family in terms of financial requirements. So this step of women employment is a big step in the direction of social engineering. During the survey, it has been found that, in every unit, separate washrooms and urinals are provided for female staff; also rest rooms are allocated for female staff to adjust with their menstrual cycle period. Women are working on computer planner machines, weighing scales and on laser machines. 67 % of the diamond units have started recruiting fresh candidates and with the help of HRD practices, they have started imparting technical and behavioral training to them to meet their requirements. Higher level of fresh candidates' recruitment was observed in diamond industry due to the process requirements and learning opportunities provided by the units. Around 55 % of the diamond units have outsourced some part of their manufacturing process with an aim to reduce the cost of production. During the survey, it has been found that some of the steps such as laser cutting, faceting in a diamond manufacturing process can be easily outsourced.
- From the collected data, it can be said that rate of return reduce by 10 % in around 11 % of the units; 44 % of the units have

experience that their rate of return decreased by 10 ~ 30 %; 41 % of the units have experience that their rate of return decreased by 30 ~ 50 %. Only one unit of diamond industry has experience a reduction in rate of return for more than 50%. This is mainly due to their highest customer base in USA and EU. The diamond market is fully competitive and prices of bigger size diamonds are set according to the price rates of Rappaport. 67% of the companies who are producing bigger size stones are driven by these rates where as 33% of the companies who produce smaller size diamonds are having a liberty to fix the prices of polished diamonds in a range. The company like Venus Jewel is able to sell its bigger size diamonds at higher rates than the rates fixed by Rappaport; this is mainly due to the credibility established by the company in international market for its products and ethics.

- From the collected data, it can be said that 33 % of the units have faced a problem of increment in maintenance expenses by 10 %; 52 % of the units have said that their expenses for maintenance increased by 10 ~ 30 %; whereas 15 % of the units have said that their expenses increased by 30 ~ 50 %. This particular variation in maintenance is mainly due to the type of technology used by the units. The variation in maintenance is mainly due to the type of advance machinery involvement in higher quality production. The unit where more no. of advance machinery is used is having a higher maintenance cost and are producing bigger size diamonds. It has been found that the units which are small in size (in terms of no. of employees) but are able to produce more due to usage of latest technology machines.
- In 67 % of the units of diamond industry, differentiation in wage scale observed between male and female employees. This differentiation in wage scale is mainly due to the timing of work. In these units, the female employees are working for 8 hours whereas male employees work for ten hours; so additional overtime is paid to them. The timing of hours for female employees is set in view of their family responsibilities.
- From the collected data, it can be said that 59 % of the units of local industries are getting the support from the bank officials for hedging of their payments and receivables. Also they have informed that

due to the uncertainty prevailing in the FOREX market, they sometimes failed to get the actual benefit of hedging. Also they have informed that bank officials are providing guidance through seminars and conferences for the FORX market on periodic basis.

- The collected data portrays that the banks / financial institutions have reduced the cash credit facilities of around 78 % of the units due to the appreciation in US \$ and recession in global market. The main reason behind reduction of this cash credit is foreign exchange; the cash credit limit sanction by banks are in Indian rupees and payments made by them is in US \$ terms. Because of the appreciation of US \$, buying capacity of the units reduced, which has ultimately reduced the flow of raw-materials for production. Also due to the appreciation, credit period, i.e. period for receivable increased. Because of this, the financial institutions have reduced the credit facilities to units.
- The collected data indicates that 85 % of the units are seeking government support for their foreign trade business. 89 % of the units would like to have subsidies from state and central government for the exports made by them. 78 % of the units are seeking support from banks / financial institutions for cash credit facilities and loans for new projects and purchase of plant and machinery; 74 % of the units are seeking support from various ministries of government for promoting foreign trade.

5. CONCLUSION AND RECOMMENDATION

Based on the data collection, analysis and inferences drawn, the findings of the preliminary survey portrays that awareness of foreign trade business and its legal regime among diamond industrialist is higher and is mainly due to the nature of business. In global trade, diamond industry of Surat is enjoying monopoly for small size diamonds, where as for big size diamonds, they are facing competition from Israel and Belgium. The small units owners of the diamond industry are seeking support from the government for subsidies, lower interest rates and extension of credit period by banks. Quality standard certificates obtained from GIA and IGI helps to establish credibility in foreign trade to generate higher FOREX and helps in trade related disputes. The diamond cluster of Surat emerged on the basis of its competitive factor conditions such as commercial acumen of Gujarati, low wages, good infrastructure and presence of Gujarati community across the major metros. Though the diamond industry is local, but it is highly linked with the economy of developed nations through global value

chain. The recession in those countries have direct impact on the economy of Surat city at large. The diamond industry of Surat heavily relies on the skill of its people to process diamonds, is in line with the arguments of Heckscher-Ohlin who had predicted that countries will produce relatively more of the goods that use their relatively abundant factors relatively intensively. In view of the recession and appreciation of US \$ rate, the entrepreneurs have adopted innovative HR practices. Due to the appreciation of US \$ and recession in international market, the local industries have reported that, banks / financial institutions have reduced the cash credit facilities. To cope up with the recession and appreciation of US \$ value against Indian rupees, the owners of local diamond industry have initiated certain steps, such as reduction in wage rates, providing employment to women in areas where less physical work demanded in manufacturing process, recruitment of fresh candidates, outsourcing of the part of manufacturing process.

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