CHAPTER - 3

Evolution of Textile and Diamond Industry

An Innovative Approach in New Product Development Process for SMEs in Surat, India
CHAPTER 3  EVOLUTION OF TEXTILE AND DIAMOND INDUSTRY

3.1 CHAPTER OVERVIEW

In the third chapter of thesis at the outset the Evolution of Textile and Diamond Industry is explained. This chapter gives an overview of Evaluation of Textile and Diamond Industry in India and the world. It describes the origin and evolution of Textile and Diamond Industry. The chapter explain the step by step evolution of both Textile and Diamond the industries. The chapter ends with the short summary.

3.2 INTRODUCTION INDIAN TEXTILE INDUSTRY AND INNOVATION

India’s textiles sector is one of the oldest industries in Indian economy socializing back several centuries. Today, textiles sector is one of the largest providers to India’s exports with about 15 per cent of total exports. The textiles industry is also labour intensive and is one of the largest employers. The textile industry has two broad segments. First, the unorganized sector consists of handloom, handicrafts and sericulture, which are operated on a small scale and through traditional tools and methods. The second is the organized sector consisting of spinning, apparel and garments segment which apply modern machinery and techniques such as economies of scale. The Indian textiles industry is enormously diverse, with the hand-spun and hand-woven textiles sectors at one end of the spectrum, while the capital intensive refined mills sector at the other end of the spectrum. The decentralized power looms/hosiery and knitting sector form the largest component of the textiles sector. The close linkage of the textile industry to agriculture (for raw materials such as cotton) and the ancient culture and traditions of the country in terms of textiles make the Indian textiles sector unique in comparison to the industries of other countries. The Indian textile industry has the capacity to produce a wide variety of products suitable to different market segments, both within India and across the world.
New Product Developments in textiles have widened our views of the world. The ever-growing field of textile products for medical and health end users has created awareness of the implications of aging populations in various regions of the world. Wars and natural disasters and demonetization of currency have heightened our sensitivity to safety and protection of people and structures. The need for protective systems for the military has stimulated fruitful research and development into materials that are light in weight but durable, materials that form an effective barrier to block chemical or biological agents, or finishes that render materials less detectable. Natural disasters remind us of the need for safe structures. Textiles are being used to reinforce structures or to form barriers to protect properties and structures from the destructive force of rising waterways, wind and erosion. In man-made disasters such as oil spills, textiles play a role in environmental remediation. In the twenty-first century, some countries will face the challenge of renewing their aging infrastructure; still more countries will be developing new infrastructure as they experience economic growth. These developments will, inevitably, stimulate a surge of demand for innovative technical textiles. The awareness of the impact of industrial activities on the environment has propelled governments to develop and implement policies for their industrial sectors. The environmental impact of producing textiles is already well known. The 'green' movement and the consumers who support it are encouraging textile scientists and engineers to develop appropriate processes and technologies to reduce the environmental footprint of textile production. While the ability to develop and design innovative textiles and textile products is essential to the sustainability of textile industries in industrialized countries, the migration of textile production from high-income countries to countries that enjoy competitive advantage in terms of production cost has offered many valuable lessons. Textile and textile product production have continued to be effective engines of growth for developing economies. The same phenomenon has brought attention to both the plight and the latent capabilities of some of the least developed countries in the world. It has also rendered developed countries vulnerable when the manufacturing sector loses its strength as a major pillar of their economic growth. 'the evolution of the global textile landscape has given us an opportunity to become more aware of places, people and the environment that surrounds them.
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The wide range of new developments signals a paradigm shift. Textiles are no longer mere inputs into a finished product; they have become sources of solutions to issues that affect society. As textiles are being used with increasing frequency to create new products that serve very specific functions, this phenomenon calls for new business models, interdisciplinary collaboration, and new measures of textiles and product performance. As a result, there is a pressing need for critical examination of the manner in which higher educational institutions design and deliver textiles programs. Finally, not only have the contributors to this book shared their expertise, they have also offered deeply meaningful reminders of the immeasurable value of textiles to the human condition.

India has been in the midst of a great social, political and economic change ever since reforms were introduced in various spheres of activity. The country has greater confidence to take on the competition from developed countries and has attracted global investors in ever-increasing measure. The Textile industry is one of the oldest industries in India. The sector has made significant contributions in terms of forex earnings and employment and is one of the mainstays of the economy. Indian Textile Industry occupies a very important place in the economic life of India. The Indian textile industry is one of the largest in the world with a massive raw material and textiles manufacturing base. Our economy is largely dependent on the textile manufacturing and trade in addition to other major industries. About 27% of the foreign exchange earnings are on account of export of textiles and clothing alone. The textiles and clothing sector contributes about 14% to the industrial production and 3% to the gross domestic product of the country. Around 8% of the total excise revenue collection is contributed by the textile industry. The textile industry accounts for as large as 21% of the total employment generated in the economy. Around 35 million people are directly employed in the textile manufacturing activities. Indirect employment including the manpower engaged in agricultural based raw-material production like cotton and related trade and handling could be stated to be around another 60 million.

A textile is the largest single industry in India and amongst the biggest in the world, accounting for about 20% of the total industrial production. It provides direct employment to around 20 million people. Textile and clothing exports account for one-third of the total value of exports from the country. There are 1,227 textile mills
with a spinning capacity of about 29 million spindles. While yarn is mostly produced in the mills, fabrics are produced in the power loom and handloom sectors as well. The Indian textile industry continues to be predominantly based on cotton, with about 65% of raw materials consumed being cotton. The yearly output of cotton cloth was about 12.8 billion m, about 42 billion ft. The manufacture of jute products 1.1 million metric tons ranks next in importance to cotton weaving. Textile is one of India’s oldest industries and has a formidable presence in the national economy, inasmuch as it contributes to about 14% of manufacturing value addition, accounts for around one-third of our gross export earnings and provides gainful employment to millions of people. They include cotton and jute growers, artisans and weavers who are engaged in the organized as well as decentralized and household sectors spread across the entire country. In June 1948 there were 1.3 million textile jobs in the US and this industry was one of the largest employers in the country. In 1995 there were half as many textile jobs and today there are less than 200,000 jobs according to the US Department of Labor statistics for 2010-2011. This is due to the high costs of production in the US versus those in emerging market countries, particularly in the Far East. To participate in this highly competitive market, US textiles manufacturers have had to find new ways of producing and creating innovative value-added products that can compete against cheaper commodity textile products from the Far East in particular. Speaking on the subject of innovation in the textile industry in March 2009, Dr Andrew Dent, Director of the Materials Library and Research at Material ConneXion, addressed these issues in a talk entitled 'Innovation in textile functionality' (Dent, 2009). Material ConneXion houses over 3000 different materials and they are continually adding innovative products to their library. The library houses examples of such materials as polymers, glasses, carbon-based materials, materials derived from nature, metals, and ceramics. Materials are displayed for customers to come in and view. Dr Dent pointed out in his talk that it is not only important to create new viable materials but also to innovate in the area of textile design. Materials such as optical fibers, photo and electro-luminescent, gel, carbon fibers and corn are new and potentially important. A good example is the use of corn to make plastics. Free from the use of petrochemicals. This new innovation could have a significant benefit for the environment.
3.3 INNOVATION AND NEW PRODUCT DEVELOPMENT IN TEXTILE INDUSTRY

3.3.1 Introduction to Innovation

The concept of innovation is not new to the marketplace. A review of the history of civilization shows many changes in technology, design markets and marketing distribution and business structure. Innovation to meet these changes is expensive: in healthy economic conditions it prospers whilst in difficult times it moves to the back burner of tactical corporate strategy. In the field of textiles, innovation has resulted in a wide range of natural and synthetic fabrics that are lighter, smarter multi-functional and with a wider range of engineered properties. Over-arching terms in the field of innovation have been used by many business writers, academicians and industrialists to define the process of innovation. A number of years ago Harvard Professor Clayton M. Christensen wrote The Innovator's Dilemma (1997), a book followed by a number of others that redefined innovation for other educators, students and the business community at large. Christensen's ideas on innovation help to explain why successful, competently managed companies can trip up even when they are in tune with their customer base and invest in leading technologies. Christensen called changes that seep into the marketplace as continual product and process renewal 'incremental change'. Such as the introduction of individual new fibers, yarns and fabrics in the textile industry. Such an example would be the use of stretch yarn from the early introduction of Spandex (an anagram of the word expands), to Lycra or elastane. Lycra, invented by DuPont chemist Joseph Shivers in 1959 is stronger and more durable than rubber and is known for its exceptional stretch and recovery properties (elasticity). These new fibers allowed companies to extend existing product lines and applications. Many companies have proved adept at anticipating and making these incremental changes. Christensen contrasts incremental change with 'disruptive innovation'. This happens when what Christensen calls disruptive technology enters the marketplace, often developed by a new player unbeknown to the leading companies. Disruptive technologies create a new value proposition in the consumer's mind that overturns the perceived value of existing products. An example in textiles is the introduction of man-made fibers in the last century. Their introduction transformed a market-place that had been dominated by natural fibers. It led to a completely new generation of fibers and
applications as well as an entirely new set of textile companies in the market. The concept of disruptive innovation has changed the basic concepts of strategy. Strategy is traditionally rooted in supply and demand conditions, and in concepts such as market share and competitiveness against existing rivals in the marketplace. This concept of strategy no longer applies when disruptive innovation makes both an existing company and its competitors irrelevant. Traditional concepts of strategy need to be replaced by a concept such as 'blue ocean' strategy proposed by Kim and Mauborgne (2005). This strategy suggests that companies can create a space in the marketplace that did not previously exist, a blue ocean, in contrast to more traditional companies operating in an established market, the red ocean. The red ocean is everything that currently is in existence. These concepts of disruptive innovation and the need for a blue ocean strategy are endorsed by key figures in business today, such as Lou Mulkem, editorial director at DBA Public Relations in New York, one of the country's premier PR agencies specializing in consumer electronics. He has been involved in the high-tech PR business for more than 25 years as both a journalist and PR executive.

3.3.2 Trends in Textile Innovation

Wearable electronics, biomedical, biomimetic and Nano-textiles Technical textiles are a growing held using technologies such as smart polymers and the convergence of electrochemistry and textiles in order to process electronic polymers into fibers and fabrics. The integration of smart functionality into clothing and other textile products will radically change the culture surrounding these products, fundamentally altering people's relationships with them and the way they use them. Smart functionality will also have an impact on the way products are designed and the materials developed.

3.4 EVOLUTION OF DIAMOND INDUSTRY

3.4.1 Introduction to Diamond Industry

India’s connection with diamonds gives back several times. But some of the most affected changes in the Indian diamond industry took place over the last four decades. A large, unrecognizable industry with no icons and no image for anyone to picture, pulled itself out of worthlessness and from a uneven collection of cottage
industry workers into the world’s largest diamond workforce that processes 11 out of 12 of the world’s diamonds. Not only that, the Indian diamond industry now makes and retails diamond jewellery to consumers all over the world. Recording that change, driven by the industry’s capacity to jointly organize itself tells how the industry’s evolution has come full circle to be one of the world’s few corporations that can actually generate trends and drive sales. The evolution of the Indian diamond industry over the 40 years truly reflects the alteration of a caterpillar into a butterfly. Back in 1973, the Indian diamond industry was an quiet caterpillar vigorously on a huge volume of mainly small diamonds of such poor quality that were at best described as being only Gems. But the Indian diamond processing caterpillar’s unusual absorption was able to turn these otherwise unwanted stones into a massive load of nice, affordable gem diamonds that almost anyone could afford. The Indian process caterpillar’s steady processing of these diamonds over the years transformed the world’s diamond consumption patterns. But the process also had a transforming effect on the Indian industry itself. Gradually, with growing assurance and a growing knowledge, the caterpillar’s hunger turned towards bigger and better diamonds. It ground itself up the tree to qualities that previously only the Israeli industry could process. The caterpillar then moved downstream into jewellery production and short time ago began the process of building a global brand for the “Made In India” label. The Indian industry is no longer an unglamorous caterpillar, it is a butterfly that is now fluttering on the world stage, now being recognized for itself. In that sense, the story of the modern Indian diamond industry goes back more than a century ago to a fateful meeting in 1909 of the elders of the Jain community in the village of Palanpur in Gujarat.

3.4.2 Growth of Indian Diamond Industry

In the 1960s, a resurgent United States of America, with a whole generation of “baby bloomers” finding increasing prosperity after the disastrous years of the Great Depression followed by World War II, provided the backbone for the growth of the Indian diamond industry. Very early on, the Indian diamond industry realised that the key to the growth of the cutting industry was a steady supply of raw material. The ability to cut even the most impossible rough gave the Indian industry a clear edge over other cutting centres. The ability meant that almost all of Australia’s Argyle mine production was cut and polished in India. When the mine began production in December 1985,
some 95 per cent of its output was considered non-gem or industrial quality. Not only that, the geological forces that had formed the mine also triggered conditions that meant that the crystal structure of the diamonds in the deposit was skewed, making the diamonds almost impossible to cut and polish while also giving them a brown body colour. Nobody wanted these diamonds. Special polishing wheels with diamond dust epoxied to their surfaces had to be developed to cut and polish them. Even then, they took forever to process. The Indian cutting industry, with its low-cost yet highly skilled labour, bought all of Argyle’s brown rough and turned them into gems. So skillfully did they manage this that for many years even Argyle was unable to determine what sort of margins were to be made in cutting and polishing its rough.

But it wasn’t all smooth sailing. The 1970s brought easy profits and great wealth at a rapid pace to the Indian diamond industry. The US delinked the dollar from its gold reserve while the formation of the Organisation of Petroleum Exporting Countries (OPEC) suddenly imparted a shock to fuel prices. Meanwhile, the consumer boom in the US had pushed polished diamond prices up beyond inflation levels. With a stock market that was unable to keep pace with this rapid increase in value, it was but natural that consumers began to look at diamonds as an investment category. The very low end, the major categories produced by the Indian industry, however, remained stable in terms of prices and the Indians quietly started building up business with a new format in jewellery selling — discount retail. So large a momentum had the Indian industry developed that De Beers decided to extend its Diamdel system, that sold rough diamonds to non-Sightholding, smaller operators in the open market, to the Indian processing industry in Mumbai. Partnering with the Indian government, De Beers launched the Hindustan Diamond Company (HDC) in 1979. India was now the acknowledged leader in small and low-end diamond processing.

The “investment boom” began feeding on itself as dealers in Israel too decided not to miss out on the good times and bid even more for rough. A worried De Beers imposed a surcharge of 40 per cent on its rough prices — even for Indian goods — at its March 1978 Sight in an attempt to cool things down. It also allowed Sightholders to leave the goods on the table if they so wished. But overall, the move backfired. Based on the logic that ‘De Beers never ever lowered prices’, and that the 40 per cent surcharge now reflected the future baseline price, other dealers paid even more for
rough. De Beers tried again in May that year, imposing an additional 25 per cent surcharge on the rough. All the Indians left their goods on the table this time and De Beers, for good measure, cut off supplies to Antwerp-based Indian Sightholders as well. But the Indians were back buying again at the subsequent Sight. Premiums continued to soar. Eventually, it was the sudden fading in US consumer demand over that Christmas season that burst the price bubble. Suddenly, some of the biggest names in the business were going bankrupt as they were saddled with huge debt, bloated inventories that no one wanted to buy and a US consumer who suddenly had no appetite for large, expensive diamonds. The Indian industry too took a big hit as demand faded. Large numbers of its workforce of hundreds of thousands was laid off and those that were retained had to absorb big wage cuts. But ultimately, the Indians came out of this stronger than before. The US consumer still wanted diamonds, but now preferred the low-end affordable kind that they manufactured. The bankruptcies in other diamond processing centres allowed the Indian industry to move upwards in the size and quality of diamonds it manufactured as it had the financial strength to take in the slack left by the financial failures. More organised manufacturing and the large-scale implementation of semi-automatic technology also meant that Indian manufacturing quality and yields had improved significantly.

But the move into what was hitherto the exclusive domain of the Israeli diamond processing industry brought to a head the tensions that had been simmering all through the 1970s. At the 1982 World Diamond Congress in New York, the Indian industry applied for membership of the World Federation of Diamond Bourses. The application was put on hold until the next Congress two years later. When this did take place in 1984 in Antwerp, India’s application was rejected.

The Indians bitterly accused the Israelis of having blackballed their applications. The Israelis denied this, saying that the Bharat Diamond Bourse, which had made the application, did not have the requisite systems in place to fulfill membership norms. Whatever the truth of the matter, the 1980s were marked by heightened suspicion and distrust between India, Israel and Antwerp. The latter accused the Indians of flooding the market with low-cost goods through the use of sweatshop and child labour. The Indians denied all of this, pointing out that their diamond industry wages were far better than what was offered by other sectors.
The accusations did not end and finally, fed up with being on the defensive, V.K. Singh, an Indian Administrative Service (IAS) officer who had been appointed managing director of the HDC, initiated an industry wide drive to ensure that no child labour was employed. The GJEPC (Gem Jewellery Export Promotion Council) weighed in with the threat to rescind the membership of any manufacturer who was found to be employing child labour. The auditing and consulting firm of A.F. Ferguson was retained to independently verify that the industry was free of any child labour. The Indian industry was able to tell the world that an independent observer could vouch for the fact that it did not employ child labour.

Singh told this writer years later that he was fully satisfied with the results. “I’d like to be able to say that there isn’t any child labour in the Indian industry,” he said, “but there will inevitably be some — under 0.1 percent — that we can’t do anything about. These will be in the cottage industry and extreme low end segment and almost all children helping their parents earn some extra money for the household.”

The 1980s was also when the Indian industry again exercised its collective organisational power and began a series of decisive moves to increase its networking ability and simultaneously move downstream, setting up modern factories to manufacture jewellery set with the diamonds it had cut and polished.

The networking effort kicked off in 1985 without any real focus or direction with the Jewel Yatra, a small trade show that had mainly retailers as its exhibitors. This was so because the retailers were promised that a certain percentage of the show’s time would be dedicated to allowing Indian consumers to visit them. So small was the show when it first kicked off that it fitted in its entirety into the ballroom of the Taj Mahal hotel in Mumbai? The exhibitors were pleased because the show format allowed them to make retail sales to an invited customer base.

Jewel Yatra wasn’t going anywhere and the Indian industry knew it. A chicken and egg situation had developed. The overseas buyer community wasn’t interested in the show’s exhibitor profile and manufacturers weren’t interested in exhibiting, as the show didn’t attract the needed visitor profile. At first the GJEPC, which ran the show,
tried to get the management of the successful JCK Las Vegas show to take over Jewel Yatra. The JCK management declined the offer.

At an industry brains trust meeting to try and come up with some answers to the problem, Sanjay Kothari, who has been chairman of the GJEPC for several terms, backed the idea mooted by Dilip Shah of Dilip Chain Industries, that the show wouldn’t get anywhere unless the Indian industry made a clear decision to turn its back on the mixed format that allowed consumers into the show and decisively moved towards establishing a business to-business networking platform for the domestic industry to begin with. Kothari courageously endorsed the idea that only through the establishment of a solid domestic business-to-business platform could the Indian industry hope to subsequently build up an international networking platform.

Kothari convinced his colleagues. The courageous decision to change the format of the show was taken. Jewel Yatra was repositioned as a business-to-business show only and a concerted effort was made to get the Indian gem and jewellery pipeline to network internally. The show was positioned in August to be a convenient stop just before the established Hong Kong show and the next series of shows in Europe. There was a huge drop at first, but the gamble paid off. The show was then renamed the India International Jewellery Show (IIJS) and an international effort was launched. Today, the IIJS is among the world’s four largest gem and jewellery industry trade shows.

So big a success has the show become that the GJEPC now also hosts the India International Jewellery Show (IIJS) Signature show in January. This smaller, more focused show is now a sort of barometer for the coming year as far as the Indian industry is concerned. The need to network and showcase the Indian industry’s abilities was necessitated by the fact that its move downstream into jewellery manufacture too was a success. Most of the initial forays in jewellery manufacture began in special export processing zones like Mumbai’s Santacruz Electronics Export Processing Zone (SEEPZ). But with increasing success and the transformation of the domestic Indian market into a major gem and jewellery consuming center, organized jewellery manufacture spread into the Domestic Tariff Area (DTA) as well.
The economic liberalization that began in 1991 played a big role in the transformation of the Indian diamond industry. The concerted swing from a decidedly socialist-leaning economy towards a free market system brought about dramatic changes in domestic consumer behaviour. Luxury consumption suddenly became an important part of the Indian economy. De Beers spotted an opportunity to develop a new market for diamonds and decided to focus a significant chunk of its global umbrella advertising campaign on India.

Even though it had a jewellery tradition that stretched back thousands of years, India confronted De Beers with a problem in that it did not really have any diamond tradition to speak of. There were a few niches where flat, uncut diamonds were used in the traditional polka jewellery, but there was nothing significant. Also, Indians traditionally did not imbue their jewellery with any emotional content — it was more a part of a woman’s personal wealth rather than a symbol of any emotional bonding or some overarching idea of something that could defy even time.

Meanwhile, the Indian diamond industry grew laterally. Many of those who had comprised the erstwhile workforce that cut and polished diamonds, now ventured into business for them. Many of these workforces were from Gujarat’s Kathiawar region. The Kathiawari entrepreneurial drive had begun. Many of today’s leading Indian firms have grown out of that entrepreneurial drive. Karp Imex, Shree Ramkrishna Export, Sheetal Manufacturing Corp., Hari Krishna Exports, Bhawani Gems, Godhani Gems, Laxmi Diamonds, Kiran Gems and Dharmanandand Diamond to name some.

De Beers had to make a fresh start in India and it decided that the way to develop a diamond tradition would be to develop a series of diamond jewellery brands that imbued the product with some specific emotion. It entered the Indian market relatively cautiously with the Nakshatra brand. This was based on the age-old Indian tradition of the floral motif and tied in with Bollywood star allure as a series of leading actresses were hired as the ambassadors for the brand. Together with De Beers’ famous umbrella campaign — “A Diamond is Forever” — translated into several Indian languages, Nakshatra was relatively modestly priced and gave diamond jewellery a safe entry into the Indian market.
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It also built up consumer valuations of diamonds in India. De Beers followed this up with three other brands — Sangini, which built on the idea of a mature partnership between a man and a woman with the imagery of a life mate who has stayed through thick and thin; Asmi, which targeted the self-purchase market for successful professional Indian women and Arisia, which showcased the large, solitaire diamond in the traditional format as a vehicle that transmitted value through time. Having launched a diamond tradition in India, De Beers then sold the brands to interested Sightholders who had moved significantly downstream and were able to carry on building on the diamond tradition. Gitanjali Gems eventually acquired all the brands and continues to operate them even today. 1979 1980-82 1982 1984 1985 1985-87 Speculative bubble bursts. Indian workforce halved but Indian industry emerges stronger than other centres.

Indian industry begins cutting better qualities and sizes that hitherto only Israel and Antwerp had processed. Intense rivalry generated. New York World Diamond Congress shelves Bharat Diamond Bourse’s (BDB) application for membership of the World Federation of Diamond Bourses. Antwerp World Diamond Congress rejects BDB’s membership application. Indians blame Israelis. They say BDB not ready with systems. 55 Argyle mine in Australia is commissioned. HDC and GJEPC launch anti-child labour drive. A.F. Feguson audits efforts and declares industry free of child labour. The move by the as big a Sightholding firm as Gitanjali Gems into not only branding its own jewellery but also retailing it, set the next phase of the growth of the Indian diamond processing industry. Against all traditional wisdom, the Indian jewellery brand has made a decisive place for itself both in the domestic as well as international markets.

Realising that it now needs to make the transformation to an industry that is fully integrated from diamond mine to consumer market, the GJEPC has now embarked on a drive to establish the “Made In India” label as something that is synonymous with quality and design leadership. This need to establish the country’s design and quality credentials over its already firmly established manufacturing process is the driving force behind the India International Jewellery Week. Just as the Milan Fashion Week is designed to underscore the prominence of Italian design, so the IIJW is showcase for the Indian industry’s abilities to not only manufacture quality product, but to also drive
consumer demand through design innovation and product development that is tailored to the dreams and aspirations of today’s global consumer.

Like the rest of the diamond industry worldwide, the Indian industry has now adapted and adjusted itself to the new political realities of Africa. Many of the big firms have moved to set up cutting and polishing factories in Botswana, Namibia and South Africa to help those African nations fulfill their social and political ambitions in having as much value added to the diamonds mined there, before they are shipped further down the process pipeline and eventually into global consuming markets. Keeping those same realities, the Indian industry, which reached out to De Beers and its Central Selling Organisation (CSO) in London almost half a century ago, has now adapted to the idea that it will be receiving its Sights from Gaborone in Botswana. Despite the fact that there is currently no direct flight to Gaborone and requires a stopover in Johannesburg to make the connection, this is the new reality of the global diamond industry and those are the rules that will have to be followed.

In keeping with this, the Indian industry has also told Rio Tinto that its almost ready new mine in Bandar in India in which India will have to develop a sales system that gives Indians the right of first refusal before the rough diamonds are shipped to world distribution and processing centres. It stands to reason that the minerals from India should beneficiate the Indian industry first. The stolid, no-nonsense caterpillar that marched its way purposeful through the lowest end discards of the diamond mines, transforming them into product that added much value to the process pipeline and sparked global consumer demand, is now an attractive butterfly itself. The generative process has indeed come full circle.

3.5 CHAPTER SUMMARY

To know the detail of Textile and Diamond industry this chapter will provides the detail evolution of both Textile and Diamond Industry in Gujarat as well as in India. This their contribution in New Product Development who has initiated to start these industries. This chapter begins with a detailed insight of the Evolution and origin and history of Textiles and Diamond Industry. The chapter discussed the introduction to Textile Industry Textile Industry and Innovation, Evolution of Diamond Industry.