Understanding the Competitive Scenario of Granite Exports from India to USA

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Abstract

India is blessed with ample varieties and reserves of natural resources, most of them having a robust market not only domestically, but also internationally. We produce as many as 87 minerals, which include 4 fuels, 10 metallic, 47 non-metallic, 3 atomic, and 23 minor minerals (Ministry of Mines, 2013). Granite falls under the minor minerals category. The present paper aimed to explore the potential of the Indian granite sector and the major market for it internationally. In the world market, there are around 300 varieties of granite that are available, out of which India supplies nearly 200 varieties. Some of these varieties like jet black and galaxy black are supplied uniquely by India in the international market. There is continuously growing demand for Indian black granite in the international markets for various needs. As building construction grows indiscriminately to meet the needs of a growing world population, it creates demand for building stones like limestone, marble, slate, and granite. Due to its (granite) beautiful finish and sturdiness suitable for interior and exterior décor, there has been a rise in its demand. In fact, in several premium constructions, it is replacing the Italian marble as well. As USA is the largest market for Indian granite, the paper tried and explored the analysis and strategies of other competing nations present in the U.S. market, which can be of great help for Indian granite exporters. An attempt was made to explore the strategic approach in order to make certain vital observations to lay down conclusions. The paper contemplated that the government, the private sector, and locals need to work together to achieve sustainable growth in the Indian granite sector within India and internationally.

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Though India is endowed with huge reserves of natural resources, but still, as a nation, we are not self-reliant. The rising graph of minerals import indicates a big gap between domestic demand and production. In fact, one of the reasons behind the weak IIP (index of industrial production) has been a declining performance of the minerals sector. Mining's share in IIP was 14.16%, which includes several metallic, non-metallic ores, and minor minerals (Ministry of Statistics and Programme Implementation, Government of India, 2014). One minor item under mining is granite; its reserves are huge, a potential source of export earning as well as for creating employment, but still, it is not showing the growth it should have. The largest market for Indian granite is USA, which after the slowdown is bouncing back and presents a very opportune market for Indian exporters to capture. In the USA market, there is an increasing quest for black granite used for kitchen countertops. India offers some exclusive varieties of black granite to the world. This provides a great opportunity for Indian granite exporters to capture the USA market and earn foreign exchange for the nation. The objective of

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this paper is to analyze the Indian granite scenario, study the USA market, which is our largest export market, and understand the competitive scenario over there. The paper identifies the other granite exporting nations to USA and screens their approach. This will provide a good understanding to Indian exporters in strategizing themselves and will help them in capturing the USA export market more efficiently.

Research Design

The paper aims at exploring the present state of the Indian granite sector with specific reference to the USA markets. This paper is conceptual in nature; wherein, qualitative methods were used to substantiate the significant issues of the Indian granite exporters, especially with reference to the USA markets. As not much of the academic literature is available on the granite sector, the present paper collects data and information from various government bodies and reports. The paper is thus exploratory in nature so as to understand the dynamics of the given sector. The study is mostly secondary in nature; wherein, data from various sources were collected and analyzed to understand and explore the inferences. An attempt is made to explore the current state of the granite industry in order to make certain vital observations to understand the dynamics of this sector.

Background of the Indian Granite Industry

➪ **Minor Minerals :** The share of minor minerals in the value of mineral production was 12.6% in 2008-09 and 12.1% in 2009 -10. The value of minor minerals in 2009-10 was higher by 12.0% as compared to that in the previous year. Andhra Pradesh, with a share of 29.6% in the value on minor minerals produced in the country, occupied the top position. Uttarakhand, with a share of 27%, occupied the second position. Next in the order were Rajasthan (17.0%), Uttar Pradesh (9.8%), Madhya Pradesh (6.1%), Kerala (4.1%), Gujarat (2.6%), Karnataka (2.1%), Goa (1.1%), and Chhattisgarh (1.0%), respectively. The contribution of the remaining States and Union Territories accounted for less than 1% (Indian Bureau of Mines, 2012).

The mineral wise analysis shows that road metal had the largest share of 23.3% in the value of minor minerals, followed by limestone (22.8%), building stone (9%), brick earth and ordinary sand (8.5% each), granite (6.6%), gravel (4.8%), marble (4.6%), quartzite and sandstone (2.4%), kankar (2.1%) , murrum (1.9%), boulder (1.3%), and ordinary earth (1.2%). The individual share of the remaining minerals was less than 1% and together contributed 3.0% to the overall value of minor minerals (Indian Bureau of Mines, 2012). Though granite is a minor mineral, but its availability is abundant in the Indian economy. There is a continuous rise in its demand in the domestic and in the international markets as well.

➪ **Granite Production in India :** India is endowed with abundant resources of a wide variety of granite comprising of over 200 shades. As on April 1, 2010, resources of granite dimension stone of all types was estimated at 46, 230 million cubic meters. Of these resources, 264 million cubic meters, that is, less than 1% falls in the reserve category, while the remaining 45,966 million cubic meters or about 99% fall in the resources category (Indian Minerals Yearbook, 2013). The state wise classification of granite is given in the Table 1.

As depicted in the Table 1, the various states of India possess different colors of granite. As granite is mostly demanded by its color and due to the wide availability of colors of granite in different parts of India, globally, buyers are looking up to us for their various requirements. Out of the total reserves, the maximum reserves are located in Rajasthan, Andhra Pradesh, and Karnataka. Their grade wise classification shows that about 7% of the total resources fall under black granite, while 92% fall under colored granite. About 1% of the resources fall under the unclassified grade (Indian Bureau of Mines, 2012).

It is clear from the Table 2 that major production of granite in raw as well as processed form is generally from states like Tamil Nadu, Karnataka, Andhra Pradesh, Rajasthan, Gujarat, and Uttar Pradesh. Details regarding the production of processed granite were not available. However, it is presumed that the processed material exported

Table 1. Varieties of Granites in Different States

STATE	VARIETY
Andhra Pradesh	Black Galaxy, Srikakulam Blue, Steel Grey,Paradiso, Anantpur Grey etc.
Bihar	Tiger Shin, Mayurakshi Blue, Sawan Rose, English Teak, Black Cheeta etc.
Gujarat	Sonabadi Grey, Balaram Pink, Ajapur Galaxy, Godhra Grey, etc.
Haryana	Steel Grey, Purplish Granite, Deep Pink
Karnataka	Ruby Red, Fish Belly, Himalayan Blue, Sira Grey, Red Multi, Tumkur Porphyry, Hassan Green, Magadi Pink, Tiger Black etc.
Kerala	Tropical Green, Paradiso, Kerala White etc.
Maharashtra	Grey Silk, Light Pink, Jhansi Red etc.
Madhya Pradesh	Multicolored, Black Granite etc.
Odisha	Berhampur Blue, Silver Grey, Seaweed Green, Chilka Blue
Rajasthan	Mokalsar Green, Nagina Green, Rosy Pink, Blue Pearl, Chima Pink,
Tamil Nadu	Kashmir White, Rawslk, Paradiso, Pink Multi, Colombo Juparana,Tiger Skin, Kunnan Black, Turaiyur Blue etc.
Uttar Pradesh	Ruby Red, Jhansi red, Grey Granite, Black Granite etc.
West Bengal	Bero Pink, Streaky Gneiss, Purulia Black, Spotty black etc.

Source: Indian Bureau of Mines (2011)

Table 2. Granite Production in Different States (Quantity in Lakhs & Value in Tonnes)

STATE	2008-09		2009-10		2010-11	
	Quantity	Value	Quantity	Value	Quantity	Value
INDIA		18127523		18526785		26531579
Andhra Pradesh	761078	15463740	648789	13994677	919000	21435632
Chhattisgarh	-	-	-	-	477	568
Gujarat	55139	11159	55139	11159	78732	32649
Karnataka	142887	1612651	228533	2486396	268438	2914183
Kerala	737	29480	1109	47687	1068	32044
Madhya Pradesh	-	-	44424	113336	56043	148603
Rajasthan	358213	493766	760594	1339802	757620	1294141
Tamil Nadu	170725	353180	174819	362679	234192	473737
Uttar Pradesh	24000	150000	24000	150000	26667	200000

Source: Indian Bureau of Mines (2011)

can be considered as the production level in the country with addition of 5% to 15% for internal use.

Granite Exports from India

As there is a good reserve of granite available in India, a lot of exports also take place. Among the natural stone category, granite is the most expensive one. Thus, its demand in the local markets is less in comparison to its global demand. A decline was noticed in its exports after the sub-prime crisis, but now again, a good trend is being observed in its exports.

As given in the Table 3, the maximum export of granite from India in terms of quantity is of crude or roughly trimmed granite followed by other granite, which includes monuments, and so forth. However, value wise, maximum export is of other granite and polished granite. A crucial point to be noticed here is that the maximum export in terms of crude or roughly trimmed granite is a loss for the nation, as it does not generate enough revenue

Table 3. Granite Exports from India (Tones/Value in ₹ '000)

GRANITE	2008-09		2009-10		2010-11	
	Quantity	Value	Quantity	Value	Quantity	Value
GRANITE : TOTAL	3958853	48149007	3827668	49937324	4369384	53841248
CRUDE/ROUGHLY TRIMMED)	2641496	16334115	2598235	16165697	2829329	16529603
GRANITE (CUT/BLOCKED)	379326	1995799	295794	2341347	353597	2354229
GRANITE(POLISHED BLOCKS/TILES)	308493	9606869	207505	6719493	392244	10721576
GRANITE (OTHERS)	629538	20212224	726134	24710807	794214	24235840

Source: www.ibm.nic.in/msmpmar

Table 4. USA Granite Import Statistics : Country-Wise

(Customer Value in $ does not include Freight & Insurance)

COUNTRY	2007	2008	2009	2010	2011	2012	2013
INDIA	204,068,750	169,933,935	89,559,985	124,662,010	146,036,667	151,287,695	156,162,267
CHINA	298,096,246	267,547,881	192,985,965	191,065,425	189,463,072	217,525,586	259,331,178
ITALY	268,648,847	203,103,334	101,857,853	118,804,004	117,863,441	115,374,264	140,844,073
BRAZIL	555,051,254	422,476,098	281,790,650	407,987,070	449,393,935	476,600,136	604,068,780

Source: Stone World (2013)

for us. Most of the revenue is generated from the sale of polished or other granite, which includes monuments and artifacts that have good demand in American and European markets.

Granite Imports in USA

As USA is one of the most important markets for Indian granite, let us understand this market in detail. The American market has seen a lot of changes in the last decade. Generally, there was a rise in the demand of the residential market during the last decade. However, this demand contracted during the subprime crisis of 2007. However, still, housing being a basic sector, its demand is still there. High end homes require more and more of granite and limestone. For these houses, there has been a rise in the demand for granite countertops. They have not been impacted by the recession. Over 300 new and small companies have entered the market to fabricate granite kitchen countertops. In USA, dimension stone is produced by five states in decreasing order by tonnage ; Texas, Wisconsin, Indiana, Georgia, and Vermont. Together, these states contributed 49% to the overall production. Out of all these dimension stones, maximum requirement or usage is of limestone and granite (USGS, 2013).

The 2013 Catalina Report on Natural and Manufactured Stones is an in depth industry investigation of the $7.3 billion U.S. natural and manufactured stone products industry. There has been a recovery in the stone market of USA since 2011. The recovery was even more during the year 2013 (Ceramic Tiles and Stone Consultants, 2013).

Table 5. Granite Imports to USA from Major Nations (Tonnes)

COUNTRY	2006	2007	2008	2009	2010	2011	2012	2013
INDIA	602,907	417,508	411,933	189,256	210,024	263,340	255,301	210,474
CHINA	494,804	485,779	437,845	276,637	270,435	301,723	346,813	376,175
ITALY	323,096	320,806	173,782	81,261	89,364	79,381	74,559	88,368
BRAZIL	976,954	836,330	490,654	440,557	510,453	550,297	599,072	723,086

Source: Stone World (2013)

Table 6. Brazilian Stone Production

Type of Stone	Production (Thousand Tons)
Granite	4,6
Marble & Travertine	1,7
Slate	0,6
Processed Quartzite	0,6
Raw Quartzite	0,6
Miracema Stone	0,2
Others (Basalt, Soapstone etc.)	10

Source: LITOS Online (2013b)

There was an increase of 28.2% in the housing sector during 2012 and 31.6% during 2013 (CTaSE and Catalina Research, 2013). With this, there is an indication of positive growth in the demand of the stone sector also.

The Table 4 shows that value wise, the maximum granite in USA was imported from Brazil. This was followed by China, India, and Italy. A major area of concern that can be witnessed from the Table 4 is that the value of Indian exports to USA has been continuously declining. Though this decline was witnessed by all nations, particularly since the subprime crisis of 2007, but most of this decline was witnessed in case of India and Italy. It can be seen from the Table 4 that though the shares of other nations in USA markets declined, Brazil's exports of granite to USA increased.

The Table 5 shows that tonnes wise also, the maximum import of granite in USA was from Brazil. The next largest exporting nation was China. The 3rd on the list is India. It can be seen from the Table 5 that after the subprime crisis, there was a major decline in granite imports in USA, but it again began improving in 2011. Hence, in the coming years, positive hopes are there from the USA market for India and thus, Indian exporters must focus on this market.

The Table 6 indicates that for Indian exporters, the major competitors are Brazilian and Chinese exporters. In fact, Brazil is the main rival for India as the availability, production, and reputation of both players is almost similar. Along with Brazil, India also holds major reserves of granite. In case of China, it is a different scenario; they buy raw granite from all over the world including USA and sell it to the world after finishing. Apart from Brazil and China, another very important player in the USA market is Italy. Though the share of Italy in the USA market is declining, still, reputation and quality wise, it is considered to be a significant player. Indian exporters must know the details of all these nations so as to make their own strategy in capturing the USA market more efficiently (Sinha, 2006).

Analysis of Competitor Nations

This part covers the analysis of major competing nations of India in terms of granite exports. The main competitor nations for India include Brazil, China, and Italy (refer to Tables 4 and 5). These are the major exporting nations to USA. Hence, an analysis of these nations gives a better understanding to Indian exporters in analyzing the competition in the overall USA market.

➭ **Brazilian Stone Industry Statistics :** Generally, overall, sale in Brazil is polarized between USA and China. The export to USA mostly consists of polished granite and similar material slabs, while China mostly buys raw granite blocks. The stone industry in Brazil performed very well during the time period from January - August 2013. During this time period, the stone segment recorded an increase of 19.2% in sales to the foreign market as compared to the sales in 2012, reaching a total of US $ 867.72 million and 1.8 million tonnes (LITOS Online, 2013b). According to data from Brazilian Centre of Exporters of Dimension Stones (Centrorochas), the total exports from the state of Espirito Santo, which is the main producer and exporter of dimension stone of Brazil, showed that the maximum sales came from USA and China. With the given data, the projection showed that export of dimension stone from Brazil increased by 25% approx. to $ 678.8 million in 2014. This is equivalent to 1.2 million tonnes of stone. The overall projection indicates an increase of 20% increase in revenue to $ 1.3 billion (LITOS Online, 2013b).

The main buyers of Brazilian granite, as mentioned, includes USA, which took over the business and was responsible for almost 80% of the purchase of polished slabs. Next in line was China, which accounted for 56% of the business done with the blocks (LITOS Online, 2013b). The Table 6 shows that Brazil, which is worldwide famous for reserves of natural resources, produces the maximum granite in comparison to other stones. Brazil, in fact, is the largest producer of granite in the world. Other stone production includes marble and travertine, slate, processed quartzite, raw quartzite, and so forth.

➭ **The Chinese Stone Industry :** For years, the stone importers from South Korea, Indonesia, Malaysia, and Australia, and so forth used to source (practically) all their requirements of stone from China. Due to lower prices and better logistics, China could maintain its position in the market. During 2012, one observed significant changes in the buying habits of buyers. With China being no longer as cheap as before, some importers started to buy some kinds of stones directly from the countries where it is quarried and also processed. This opened the door for several other stone producing nations to market their products.

Since many years, China was known as the most important nation for the quarry owners. In fact, quarry owners started believing that the moment they would open a quarry, the Chinese buyers would be ready to buy stone. They began believing that Chinese stone buyers at the foot of the quarries would buy every block available, irrespective of quality, and that this would be a permanent phenomenon of their business life. If there was ever a safe business in the world, some even thought of just opening a quarry of limestone and granite, and let the Chinese know of its existence, and this definitely would be followed by the huge amount of money flowing in. Such was the buying tendency of Chinese importers. In fact, China became the largest stone exporter nation in the world. However, all this began to change with the slowing down of the Chinese economy.

In 2012, in response to the slowdown in the construction sector and tight credit conditions for businesses in China, the buyers' tendencies changed. The Chinese buyers became very quality conscious and selective in buying stones. Along with the rising cost of wages and other inputs like energy, and so forth, it was no longer viable to use the same manually oriented production processes which allowed Chinese companies to extract a first-quality tile out of even a poor-quality block.

By the end of 2012, many block exporters from all over the world saw a reduction in exports to China anywhere in the range of 30 - 80 % (LITOS Online, 2013a). The good news coming out of China towards the end of 2012 was that several economic statistics indicated that the economic slowdown may have reached the bottom. The bad news was that even if the economy maintained its 7-9% economic growth, the stone industry was unlikely to see any recovery in the demand during 2013 due to the time between initiating building projects and the installation of stones. However, China will continue to be a huge market of stone for the years to come. The process of urbanization, which brings around 300 million people from the rural areas to the cities in the next decades, means there will be a lot of construction going on in the country. However, with the slowing down of China in case of stones' exports, India has an advantage in capturing the USA market more efficiently. Having said all this about China, the ultimate truth is that the information collected about this nation is always doubtful due to their political structure.

➭ **The Italian Granite Industry :** The economic crisis prevailing in Europe is causing a huge uncertainty not only in the stone industry, but also in the overall market. Only Poland is considered to be a significant growing market in the world of the stone industry. However, the new cautioners's attitude of bankers in Poland and strict government policies in giving credit added to more uncertainty. Thus, the market of Poland was rated as stable only and not as a growing market in 2013.

This when added to the fact that their culture uses a lot of stone for various reasons makes this a very potential

Table 7. Stone Exports from Italy

Italy- All Countries	Exports	
	% Difference 2012/11	
	% Quantity	% Value
Granite Blocks and Slabs	-1,83	3,7
Finished Granite Products	-2,35	3,2
Marble Blocks & Slabs	7,17	5,8
Finished Marble Products	5,79	17,65

Source: LITOS Online (2013c)

market for stone exporters. Thus, in spite of the financial crisis going on in this region, Europe remains a major market for stone exporters. Even the normal renovation and restoration work that goes on all the time everywhere would create a huge market in the coming time. One cannot expect a great demand coming out from South Europe as the economic crisis in countries like Greece, Italy, Portugal, and Spain is on.

In case of exports from Italy, it is observed that though tonnes wise, their exports declined, but value wise, the same was positive. Italy is known for its superb quality of marble. The same advantage is passed on in the case of granite as well. Buyers perceive Italian stone as one of the best quality in the world. Thus, they are ready to spend a good amount for buying it. So, though the volume of exports of Italian granite to USA declined, but quality wise, Italy is perceived to be one of the best in the market. Indian granite exporters, while dealing with Italian competition, must take care of the good quality that Italy offers and strategize accordingly.

The Table 7 indicates that Italy exports mostly marble and its products. In spite of recession in the global market, Italian marble is in demand worldwide. However, in granite exports, there was a decline in quantity terms. But interestingly, value wise, even granite exports were positive. The decline in quantity but positive value matches with the above discussion of the paper that Italian stone is perceived to be very good (quality wise), and thus, this brings more value for its exports.

Discussion

In case of granite, India is now the third largest exporter nation to the U.S. The first exporter nation is Brazil followed by China. Earlier, Italy was the third largest exporter nation, but has been replaced by India. So, India has great potential to explore in the U.S. market. However, apart from the potential, the major challenge that India faces is the stagnation in the Indian granite market share. Since 2008 till 2011, the share of India in the U.S. market remained stagnant at 14% -15%, while the share of Brazil and China in the U.S. market rose continuously. This is a cause of worry and various stake holders of the segment should seriously consider the same.

The main competition for India is from Brazil and China. Brazilian quality of granite is rated as one of the best in the world, while Chinese exporters are most efficient when it comes to their prices. Quality of granite is mostly viewed in terms of the availability of colors and finish that a nation offers. Even India offers a wide range of colors and has sufficient stocks as well. Perception of Chinese quality is not very good.

Thus, Indian exporters must concentrate on the quality that they offer for exports, as it will build a good reputation for them in the long run. This will help in creating a good perception in the minds of buyers, which is very important for a commodity like granite, whose durability is long. Furthermore, Indian exporters must focus on selling the finished products of granite like monuments, artifacts, or polished tiles of granite. This will generate more employment for the nation and will fetch a higher value for their goods. Dealing with Brazil and Italy, India needs to improve its quality in terms of polish, finish, cut, etc. The special colors that India offers like jet black, black galaxy, and so forth should be given more pre-eminence while exporting to USA. Dealing with Chinese competition requires a different strategy as the Chinese give tough competition in terms of prices and not on quality. For dealing with such competition, Indian exporters must be very cost competitive.

Conclusion

The Indian granite industry is a highly fragmented sector. The sector governs a good image regarding its prices and quality in the international market. As India owns major reserves of granite sufficient for domestic demand, there is a great potential for its exports also. USA being the most important market for Indian granite exports is analyzed in the study. Brazil has a complete dominance in the sector. They are the largest procurer and supplier of granite to the world. Even in case of USA, Brazil is the biggest exporting nation.

China is one such nation whose strategy to capture the foreign market has been very different from the rest of the players. They buy raw granite from all over the world and finish it and sell everywhere. Chinese granite, being the cheapest in the world, gives tough competition to the rest of players. At the domestic level, adequate investment, cooperative attitude of the government and locals needs to be encouraged as mining needs latest scientific advancements and geological instruments for enhanced production in a sustainable manner. Therefore, it is essential to plan an integrated approach for the development of mine areas. It includes government, respective bodies like Chemical & Allied Products Export Promotion Council, All India Granite & Stone Association, mine owners, and exporters. They all need to work together so as provide the best quality to the world with the most efficient logistics and prices.

Implications

Indian exporters and researchers need to take note of the competitive scenario prevailing in the U.S. market by devoting more efforts so as to enhance their strategies and capabilities. As granite is an unorganized market where most of the players are small and medium enterprises, such type of research studies act as an important source of information for a better understanding of the market dynamics. This study has attempted to provide information about the competitive scenario and the strengths of other players of the granite industry via way of exploration, explanation, and description of the compiled information. This research provides a roadmap for understanding the current situation, prospects, and challenges ahead, which would be useful in developing better insights and policies required for this sector.

Limitations of the Study and Scope for Further Research

The study focuses only on the marketing aspect of India's granite. The attention is given only to understand the dynamics of the U.S. market and not of other nations. Due to scanty literature available, the study depends on reports published by various government and private agencies of this sector. The present study directs its focus only towards the exporters and not on the domestic traders of granite in India. The study could not cover the other related aspects like environment, government policies, mining issues, and so forth.

This paper highlights the current production and export statistics of the Indian granite sector. The paper also identifies the major competitor nations of India and highlights their strengths. This can be taken up by the exporters in formulating their own strategies for the U.S. market. This area can be taken up by the researchers for conducting a comprehensive analysis. Based upon the propositions, relevant hypotheses can be developed and tested by the researchers. Empirical research can be conducted to prepare a robust framework that can be used by the exporters in fostering their international businesses.

In fact, a study can also be conducted at the domestic level so as to understand the dynamics and government policies of this sector internally, which would offer more scope for research and developing new insights. Further on, it can be extended to other new emerging markets for Indian granite. The issues that can be focused for further research may include Indian government's policies and comparison with other competing nation's government policies, major challenges before Indian exporters at the international level and other nations' SWOT analysis. Such research studies can prove to be a great source of information to this highly unorganized sector, which carries a great potential for the nation in terms of employment generation, earning foreign exchange along with building a better image and reputation of Indian exporters in the international markets.

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