

A Study of Sustainable Mining Development by Porter Five Forces Analysis (Marble and Granite Industry)

Amit Kumar Sharma

B.K. School of Management, Ahmedabad

Abstract—This is conceptual type of study and aims to undertake an analysis of Marble & Granite Industry (MGI) of India and form a basis for future strategies for companies. The Marble & Granite industry faces challenges on marketing strategies as well as choice of suitable competitive management. In order to evaluate Marble & Granite industry, the researchers of this study support Michael Porter's Five Forces Analysis in the strategic management and marketing literatures Porter's Five Force Model is utilized as a framework with a view to understand the industry at core level. The five forces presented in this model are; degree of rivalry, supplier power, buyer power, barriers to entry and threat of substitution. The data source for this study is mainly secondary source. The data explores on strong buyer power, high rivalry, threat of new entrants and threat of substitution which makes the industry more competitive. The main contribution of this investigation is to combine marketing tools and strategic management and provide some recommendations to marketers and managers working in Marble & Granite industry of India. This study may be useful for academicians, researchers and industry professionals for better growth of Marble & Granite Industry of India. Further research can be held by extending the research methodology for primary data source by covering responses from Marble & Granite Industry professionals.

Keywords: Degree of rivalry, Supplier Power, Buyer Power, Barriers to Entry, Threat of substitution

1. INTRODUCTION

The word granite comes from the Latin granum, a grain, in reference to the coarse-grained structure of such a crystalline rock. Granite is a common and widely-occurring group of intrusive folic igneous rocks that form at great depths and pressures under continents. Granite consists of orthoclase and plagioclase feldspars, quartz, hornblende, biotitic, muscovite and minor accessory minerals such as magnetite, garnet, zircon and apatite. Rarely, a pyroxene is present. Ordinary granite always carries a small amount of plagioclase, but when this is absent the rock is referred to as alkali granite. An increasing proportion of plagioclase feldspar causes granite to pass into granodiorite. A rock consisting of equal proportions of orthoclase and plagioclase plus quartz may be considered a quartz monzonite. A granite containing both muscovite and

biotite micas is called a binary granite. The average density is 2.75 g/cm³ with a range of 1.74 to 2.80.

Marble is the most elegant stones in its own right. The word 'marble' triggers awe and demands respect for its royalty. No wonder 'Taj Mahal' that was constructed in pure marble has kept the world under its spell for many epochs now. No wonder you want a house or an office brandishing its beauty and glory in marble. In India, marble stone is held in high esteem and symbolizes the aesthetic grandeur of any construction. Besides reflecting the royalty of the household decorated in marble, the stone also demonstrates the rich tradition which India is steeped in since ages and epochs. Ever since the Government of India pronounced Granite as a Trust Sector in 1990, the granite industry has taken a new turn. Today granite has emerged as a major foreign exchange earner. India's export of granite and granite based products witnessed a phenomenal growth by reaching a level of Rs. 3, 490.58 crore in 2005 -06 as against Rs. 2, 562.26 crore in 2004 - 05 thereby registering a growth of 36.23 percent. The granite industry in India is concentrated mainly in the states of Karnataka, Andhra Pradesh, Tamil Nadu and Rajasthan. Realizing huge potential of granite, many others states have set up granite units. These include: Orissa, Madhya Pradesh, Assam, Gujarat, Maharashtra and Bihar

The total estimated / projected resources of granite in India by Indian Bureau of Mines (including Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Orissa, Rajasthan, Tamil Nadu and West Bengal) are as follows:

Table 1

PROVED	PROBABLE	POSSIBLE	TOTAL(IN THOUSAND TONES)
11,114	332,457	683,850	10,27,421

India's granite resources are very large which can last for hundreds of years and meet the demand for a long time

Indian Bureau of Mines assessed marble resources in India in the year 2000. Subsequently, extensive deposits spread over 65 sq. Km. area were discovered in Madhya Pradesh and are now being actively exploited. A consolidated statement indicating resources / reserves established by GSI, IBM, State departments of Mines & Geology is indicated below:

Table 2

STATE WISE MARBLE RESOURCE	TOTAL(IN MILLION TONES)
Rajasthan	1144
J& K	405
MP	400
Gujarat	95
Chhattisgarh	83
Maharashtra	59
Haryana	22
Uttaranchal	6
Sikkim	2
Total	2216

Present investment in dimensional & decorative stone industry in India is estimated at Rs. 10, 000 crores. It is expected that given the policy support, the total sales turnover of all the stones, which is today at around Rs. 15, 000 crores will increase to over Rs. 44,788 crores by 2012, Rs. 1, 11,444 crores by 2017 and Rs. 2, 77,304 crores by 2022 considering an estimated growth rate of 20%. In order to meet the projections in next 15 years, it is estimated that further investment have to go up by about Rs. 2, 00,000 crores (including foreign investment) by 2022.

2. OBJECTIVES OF THIS STUDY

The following objectives are formed for the purpose of this study

- (1) To analyze Indian Marble and Granite industry
- (1) To examine Indian Granite and Marble industry in terms of future development
- (2) To examine applicability of Porter’s five force model for Indian Granite and Marble industry

2.1 PORTER’S FIVE FORCES MODEL ANALYSIS MARBLE INDUSTRY

Porter’s five forces model provides one way to present the current position and presents an insights into marble industry by showing how the forces of supplier power, buyer power, threat of substitution, barriers to entry and internal rivalry as shown in the following figure.

Internal competition in marble and granite industry is very high in India. There are many companies in different states of India for this industry. Government policy and less control of state governments within India on marble and granite industry of India, the competition and internal rivalry has taken place. The main characteristics of such a situation are as follows.

Figure 2. Porter’s Five Forces model adapted for the marble industry

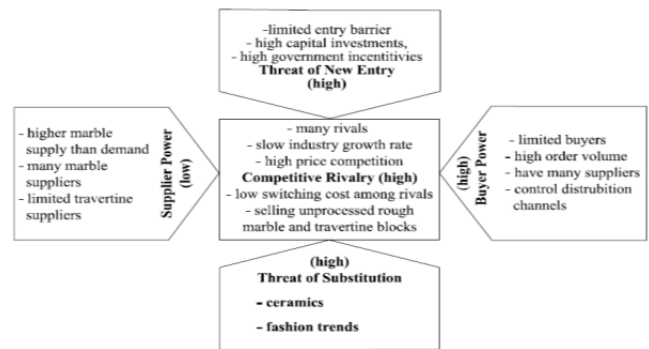


Fig. 1

Source: Porter M E (1980) competitive strategy, techniques for analyzing industries and competitors, the free Press Yew York USA Page-4.

(1) Number of companies in limited area of natural resources completion and rivalry for the same customers. (2) Slow market growth causes marble companies to fight for market share. (3) Low switching costs increase rivalry. (4) More and more natural stones are also competing to reach more potential customer s not only in local market but also in international market. (5) Possibility of entering new companies in the industry the threat of new company(s) entry in the industry is the high because of lack of significant barriers on their entry. New companies can reduce the profit margins of existing companies in Indian marble industry.

Buyer power refers the power of your customers to drive down your prices. How easy it is for buyers to drive prices down shows bargaining power of buyers. This power is driven by the number of buyers, the importance of each individual buyer in an industry, switching cost from one supplier to other suppliers, and so on. If a company deals with few and powerful buyers, these powerful buyers will be able to force their wants and control the company easily. Buyer power increases with the buyers` purchasing power from the same supplier in large amounts.

Threat of substitution refers the extent to which different products used in place of companies` products or offered by other industries. The number of substitute products and cost of switching them affect the treat of substitution. If the customer has low switching cost to substitute products, threat of substitute will be very high.

Table 3

Year	Export Rs crore
2008-2009	6,229
2009-2010	6,255
2010-2011	6,587
2011-2012	7,997
2012-2013	9,320
2013-2014	>8,000

Exports including other natural stones.

Source: All India Granite and Mines Association

3. COMPETITIVE MANAGEMENT AND MARKETING STRATEGY

The marble industry of India is highly competitive because of high qualitative as well as quantitative rivals. Buyer power, ceramic substitutes and new entry to marble industry from the various countries. Even though demand of marble grows every year, demand growth is not enough at present. It is necessary to implement competitive management and marketing management with a view to increase demand of marble at worldwide.

4. MANAGEMENT STRATEGIES

Porter (2004) has presented three generic strategies for improving the competitive position of a company, cost leadership, differentiation and focus to better compete in either local or international markets. These generic strategies have been one of the most widely accepted methods of discussing, categorizing and selecting company's strategies. A company has to select a generic strategy amongst these for competitive market strategies. (Akan et.a. 2006) as shown in the following Fig. 2

		Competitive Advantage	
		Lower Cost	Differentiation
Competitive Scope	Narrow Target	Cost Leadership	Differentiation
	Broad Target	Cost Focus	Differentiation Focus

Source: Porter M E (2004) Competitive strategy. Techniques for analyzing Industries and competitiveness The Free Press New York USA p 396

The cost leadership strategy is that the company can create such a price that it can create good and competitive market for its product(s).It may be lower cost. Such a lower cost can translate the profit margin. But it is necessary to maintain the factors like, economic scale, labor cost high government incitements. In this sense, the company tries to make the lowest cost with good quality of product(s).

Achieving focus means that a firm sets out to be best in a segment or group of segments. There is two several of a focus strategy: cost focus and differentiation focus.

According to the Porter`s model, Indian Marble and granite companies should pursued their buyers or distributors to establish strategic suppliers` alliance. Indian marble companies should realize that architects, builders, contractor`s suppliers, buyers and logistic providers are an essential part of success. Strategic suppliers` alliance is a strong relationship formed amongst companies to marble supply chain to achieve specific objectives and benefits.

Pull and Push marketing strategy can be adopted by Indian marble industry with a view to increase sales in a better way. Such marketing strategy can be explained by the following diagram.



Fig. 2

Push and Pull marketing each have their place. Push marketing is often used as a lead generation approach, but the sales conversion rate is generally low. Push marketing is more effectively for awareness building, particularly when dealing with target markets that value familiarity with the brand when making a purchase decision. Pull marketing generally produces higher conversion rates and shorter sales cycles, as you are dealing with customers who are already actively looking for a product. Pull marketing can also be effectively used for awareness building, for instance through the use of social media tools, such as blogs, and forums. Regardless of the approach you choose, it is important to do your research to understand who your target market really is. Talking to your prospective clients, you want to know who they are, where are they getting information and how they are behaving, as your first step. It is crucial to get an understanding the needs of your clients. This research will then help to identify the best marketing strategies for these individuals.

5. CONCLUSIONS AND RECOMMENDATIONS

The following conclusion recommendations can be made on the basis of the above study for Indian Granite and Marble industry.

- 5.1 India faces completion in granite and marble industry with China and other countries in context to some marble and granite processing issues which may lead to sales in slow motion.
- 5.2 The level of government incitements should be at high level to match the export business with the leading exporters of the global level.
- 5.3 Marketing strategies of Indian companies should be made more effective and objective oriented.
- 5.4 Brand management should be made effectively by the companies with innovative ideas by implementing Porter`s model as discussed in this study.
- 5.5 Push and Pull strategy is also applicable for marketing of product(s) of marble and granite on India.

5.6 Differentiation strategy can also be made applicable to Indian companies like Italian companies.

5.7 Cost leadership strategy can also be made applicable to Indian companies like Chinese companies.

5.8 The real market value of this industry can be assessed by applying Porter's five force model at core component level of industry units.

5.9 Demand and supply level of this industry can be examined by the applicable model of Porter's five force.

5.10 In conclusion, this study has positive outcomes on applicability of Porter's five force model.

6. LIMITATION FURTHER RESEARCH

This study has certain limitations like; academic study, secondary data and broader area of research. Further research can be conducted with primary data collection from appropriate level by examining Porter's Five Force Model by précising the area of research to make comparison of outcomes with this study.

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AUTHOR PROFILE

- Name- SHRI AMIT KUMAR SHARMA
- Highest Degree- Pursuing Ph.D from B.K.School of Management, Ahmedabad.(Registration on 2014)
- Current Position- Working as Asst. Manager in M/s. BEML LTD (PSU under Ministry of Defense) since 2010.
- Major Achievements- Gold medalist from MBA Marketing from Pune University in 2009.