



Challenges in the International Marketing of Quartz and Feldspar Minerals from Rajasthan

KEYWORDS

GDP, L/C, EOU, EPIP, Container Depots, ISO, International Marketing

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ABSTRACT *The global mining industry drives more than 45% of the world's Gross Domestic Product (GDP) either on a direct basis or through the use of products that facilitate other industries. Mineral are non-renewable natural resources therefore these are to be exploited scientifically, their proper conservation and value addition aspects are to be taken care of for optimal use of these limited rich natural resources. Rajasthan is called museum of minerals. Out of 79 varieties of available minerals, 58 No. are commercially produced and have significant contribution at National level. The quartz and feldspar minerals are two important industrial minerals which are produced in substantial quantity from the State. There are hundreds of Ball Mills and Grit factories under operation in the State and are dispatching mineral powder and grains to adjoining Gujarat. The quartz grains are also being exported to Vietnam, China, Korea, Taiwan etc. There is lack of awareness amongst entrepreneurs regarding export rules, Taxation, Port facilities, Opening of Letter of Credit (L/C) etc which is hindering export of these potential minerals. The Export Policy 2009-14 of Government of India although is facilitating the entrepreneurs for increased export yet the import-export policy of other countries is more attractive and with less taxation. Hence, it is high time to establish additional Export Oriented Units (EOU's) in the state and to make the export policy more realistic with due awareness generation. A few other constraints which require attention are strengthening of mining infrastructure, development of Export Promotion Industrial Parks (EPIP's), setting up of Container Depots, facilities for product testing particularly for small scale units, encouragement to quality up gradation through ISO Certification etc. These will go a long way in acceleration of minerals export from Rajasthan and particularly of industrial minerals like Quarts & Feldspar.*

World Overview:

International trade is the exchange of Capital, goods and services across international borders or territories. In most countries of the world, such trade represents a significant share of Gross Domestic Product (GDP). Industrialization, advanced transportation, globalization, multinational corporations and outsourcing are having a major impact on the international trade system. Increasing international trade is crucial to the continuance of globalization.

Minerals are valuable natural resources being finite and non-renewable. They constitute the vital raw materials for many basic industries and a major resource for development. The use of minerals has been instrumental in raising the standard of living of mankind. The sophisticated world of today is largely the result of enlarged use of minerals. Minerals are indispensable to man. The development of a country is directly related to availabilities of mineral resources and their exploitation. They form the backbone of economic growth and industrialization of the nation.

The global mining industry drives more than 45% of the world's GDP, either on a direct basis or through the use of products that facilitate other industries. Mining product revenue contributes 11.5% to global GDP; mining service industries a further 21 to 23% and fertilizers for agricultural, fuel for transport and materials for construction and thus minerals and mineral products contribution to global GDP is approx 45%. Thus mining is the most important industrial activity in the world today.

The mining industry has entered a new era. Demand continues to be stoked by strong growth in emerging markets. Supply is increasingly constrained as development projects become more competitive and are typically in remote, unfamiliar territory. The cost base of the industry has changed because of shortage of labour, non-availability of high grade raw materials, short term fluctuations in the international market across many areas of the globe etc. There are many challenges in international trade of minerals like varied Rules & Regulations, considerable tax variations, port facilities, trade polices etc.

Indian Scenario:

India produce as many as 86 minerals which included 4 fuel minerals, 10 metallic minerals and 46 non-metallic (industrial) minerals, 3 atomic minerals and 23 minor minerals (building and other materials). Indian mining industry is characterized by a large number of small operational mines. The value distribution of mineral production showed that fuels accounted for about 70%, metallic minerals about 16%, non-metallic minerals about 3% and minor minerals the remaining 11%. The contribution of the mining industry to India's GDP increased from 1.9% in financial year 2010-11 to 2.3% in the financial year 2011-12. The industry's contribution to GDP is estimated at INR 1,105 billion during the year 2011-12.

The National Mineral Policy (NMP)-2008, Foreign Trade Policy-2009-2014, various International Trade Agreements and the Foreign Direct Investment (FDI) Policy facilitate international trade yet international trade witnessed competitiveness, quality assurance, procedural constraints and lack of knowledge of entrepreneurs.

Rajasthan – A Mineral rich State:

The state is geologically and mineralogically so endowed that it is called museum of minerals. 79 minerals are available in Rajasthan out of which 58 minerals are commercially produced. The state has a glorious heritage in the field of mines and minerals and is second only to Jharkhand as regards to minerals wealth. In the year 2010-11, the minerals sector contributed Rs. 1929.52 crores to the State Exchequer as mineral revenue in addition to providing direct and indirect employment to more than 25 lakhs people in the State.

Rajasthan possesses lion's share in the country in production of few important minerals and also contributes significantly in few other minerals as revealed by Table-1.

Table – 1 Percentage contribution of minerals at national level from state of Rajasthan

S. No.	Mineral / Metal	% of India's production
1.	Wollastonite	100
2.	Zinc-Concentrate	99

3.	Lead Concentrate	95
4.	Silver	95
5.	Gypsum	95
6.	Marble	90
7.	Calcite	90
8.	Ochres	90
9.	Soapstone	90
10.	Rock Phosphate	85
11.	Bentonite	80
12.	Fuller's earth	74
13.	China Clay	70
14.	Ball Clay	70
15.	Sandstone	70
16.	Flagg Limestone	70
17.	Feldspar	62
18.	Mica	42
19.	Copper	40
20.	Quartz	29
21.	Granite	23
22.	Limestone	20

Source: India, Mineral Wealth of Rajasthan, Department of Mines and Geology, Shastri Circle, Udaipur, March-2012

Government of Rajasthan announced State Mineral Policy-2011 and also revised the rules for minor minerals so that mineral developmental activities can be accelerated while maintaining the surrounding eco-system.

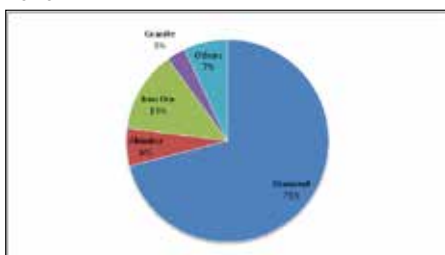
Quartz & Feldspar – Important Industrial Minerals:

Quartz and Feldspar are important industrial minerals produced from Rajasthan in huge quantities. Both the minerals are important raw materials for ceramic tiles and glass industries. Pure quartz and silica sand have fair demand in semiconductor and electronics industries. There are 1007 No. of mining leases of quartz in the state. The main concentration is in Rajsamand district (615 Leases) followed by Ajmer(161 Leases) , Udaipur (53 Leases) , Tonk (52 Leases), Jaipur (32 Leases) & Pali (32 Leases). The total production during the year 2011-12 was 5.97 lacs tones valued at Rs 15.95 Cr approximately. Similarly, there are 1035 Leases of Feldspar in the state out of which maximum are in Bhilwara district(544 Leases, followed by Ajmer(330 Leases) , Sikar (123 Leases) and Jaipur (37 Leases). The total production of Feldspar during the year 2011-12 was 15.34 Lacs tones valued at Rs 42.02 Cr approximately. From the above it is revealed that both the minerals are produced in large quantity from the State. The major production is dispatched as raw materials form (powder, grains/grits) to adjoining Gujarat state where they are consumed mainly in tiles industries.

Export Scenario:

In the last decade Indian exports have been growing at a robust pace. During the year 2010-11, the value of exports (including re-exports) of ores and minerals were at Rs 165,080 crore accounted for 14.45% of the total value of all merchandise exported from India. The pie chart below(Fig-1) shows the share of different commodities in India's export of minerals & its allied products.

Fig -1 Percentage share of Minerals exported from India in Year 2010-11



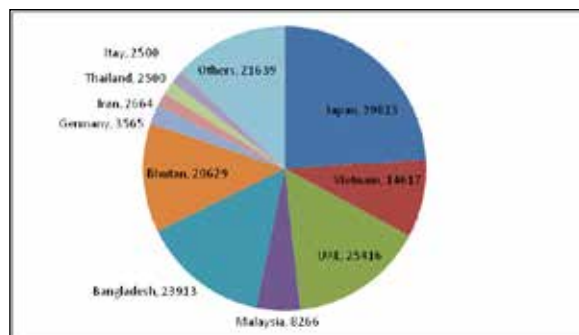
Source: - Indian Mineral Year Book, 2011, IBM, Nagpur
During 2011-12, the value of exports stood at US\$ 303.7

billion and recorded a growth of 20.9 percent, as compared with an increase of 40.5 per cent during the previous year.

Rajasthan registered a 33% rise in exports in the financial year 2010-11 and maintained its 10th position in the country with Rs. 23,753 crore in the year 2010-11. Exports from the state reached Rs.32,749 crore in the year 2011-12. The major contributors are agro and food products, minerals, marble, stores and chemicals. The export figures of minerals from Rajasthan are not readily available.

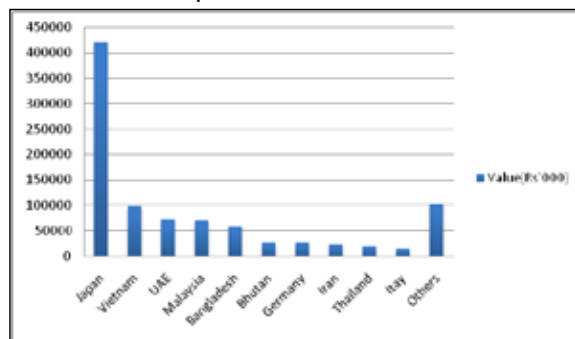
Quartz grits (grains) of snow white variety (almost pure variety) from parts of Udaipur, Bhilwara, Pali, Ajmer, Rajsamand and Tonk have fair demand in International market in tile manufacturing, in semi-conductor and in high precision electronic industries. The quartz is exported mainly to Japan, UAE, Bangladesh and Vietnam. However, the export of quarts and quartzite (natural) from the country decreased considerably to 203,363 tones in 2010-11 from 256,421 tones in the previous year. As shown in Fig-2 below, exports were made mainly to Japan (23%), UAE & Bangladesh (13% each), and Vietnam (12%). In Fig -3 the value of export made to different countries is mentioned. The total resources of quartz and silica minerals are 4,750 million tones as on dated 1.4.2010. Therefore, there are very good prospects of increasing the export of quartz and silica minerals to the neighbouring countries.

Fig - 2 Quantity in metric tonne (MT) of Quartz exported in Year 2010-11 from India



Source: - Indian Mineral Year Book, 2011, IBM, Nagpur

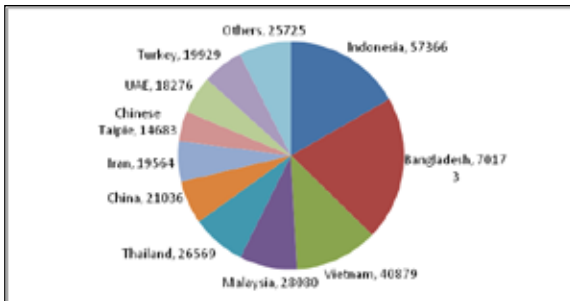
Fig - 3 Value of Quartz exported in Year 2010-11 from India



Source: - Indian Mineral Year Book, 2011, IBM, Nagpur

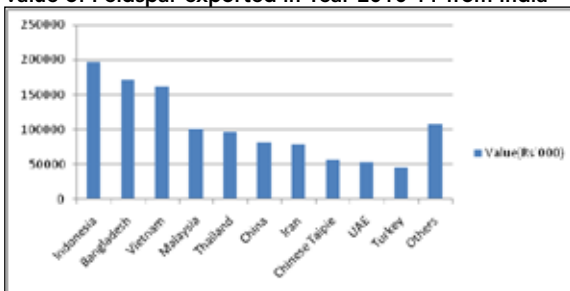
Similarly exports of feldspar (natural) increased to 342 thousand tones in the year 2010-11 from 316 thousand tones in the previous year. Exports were mainly to Bangladesh (21%), Indonesia (17%) and Vietnam (12%) as shown in Fig – 4. Value of exports in Rupees is shown in Fig – 5.

Fig – 4
Quantity (in MT) of Feldspar exported in Year 2010-11 from India



Source: - Indian Mineral Year Book, 2011, IBM, Nagpur

Fig - 5
Value of Feldspar exported in Year 2010-11 from India



Source: - Indian Mineral Year Book, 2011, IBM, Nagpur

The total resources of feldspar mineral are 132.00 million tones, out of which 62 % are in Rajasthan. Therefore, there are very good prospects of increasing the export of feldspar mineral to the neighbouring countries.

Quality parameters to enhance Exports:

Most of the ball mills, grits factories are not adhering to the quality parameters for both export from the Rajasthan to Morbi (Gujarat) as well as from the country to Vietnam, China, Taiwan, Korea, Japan etc.

In quartz, the main impurity is iron, it should be free from it. Similarly in feldspar also iron and calcium are major impurities. Feldspar is found in two major qualities (Soda and Potash feldspar). In chemical composition quartz chemical formula is SiO_2 (Silicon di oxide) while feldspar are Sodium-Potassium Silicates.

Value addition and quality parameters can considerably enhance the price (manifold) therefore these minerals have fair export market.

Future outlook:

The demand for quartz and silica sand has been steadily increasing over the years to cater to the requirement of ferro-silicon, silica-manganese, silica-chrome, silica-refractories, glass and for moulding and casting purposes. It is reported that glass industry is expected to grow by 10% every year due to rapid rise in infrastructural activities in the country and in the world in general. The demand of both Soda and Potash Feldspar is also increasing day by day in ceramic, glass, ce-

ment, refractory, electrode, abrasive and medical industries. Thus, there is fair scope of export of high and pure quality mineral products in coming years.

Thus the constraints in increased exports of these potential minerals are required to be analysed for getting increased foreign exchange.

Challenges in International Marketing:

The minerals like quartz and feldspar have fair export potential but due to lack of information and awareness one cannot realize many factors like:

- Quantum of actual export from Rajasthan;
- Quality parameters of minerals required in International Market;
- Details of Buyers and their requirements;
- Rules and Regulations about Export and Import of minerals;
- L/C opening and its procedure;
- Foreign Trade Policy 2009-14 of Govt. of India;
- Foreign Direct Investment(FDI) Policy of Govt. of India;
- Various International Trade Agreements and their scope;
- Details of National Mineral Policy-2008;
- Facilities of Dry Port;
- Facilities at Special Economic Zone (SEZ);
- Incentives being provided in a EOU; and
- Port facilities etc.

The above challenges are required to be solved for acceleration of export of quartz and feldspar minerals from Rajasthan as their resources are in plenty in the State. Moreover hundreds of Ball mills, Grit plants are in operation at various industrial clusters in Udaipur, Bhilwara, Rajsamand, Ajmer, Jaipur districts etc who are manufacturing the powder and grits of required size.

Concluding Remarks:

Rajasthan enjoys a strategic geographical position where in it is situated between Northern and Western growth hubs in the country and 40% of Delhi-Mumbai Industrial Corridor (DMIC) runs through it. The economic agenda of Rajasthan focuses on four important sector (thrust areas) out of which 'Mining' is one such sector. These four sectors contribute over two-thirds of the state's economic output. Author has analyzed the available secondary data and interviewed a few mineral based industry owners and come to the conclusion that for increasing international marketing of potential quartz and feldspar minerals, we have to take care of following points:

- Strengthening mining infrastructure;
- Promotion of exports;
- Focus on high value and pure quality minerals;
- Special emphasis for promotion of mineral processing;
- Development of EPIP (Export Promotion Industrial Parks);
- Setting up of Container Depots near major industrial growth centres;
- Providing facilities for product testing and development particularly for small scale units;
- Encouragement of quality up-gradation by adoption of total quality management and ISO series certification.

Authors are doing in depth research on the topic of the paper so as to indicate the actual challenges and their extent of influence on international marketing of these abundantly available minerals.

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