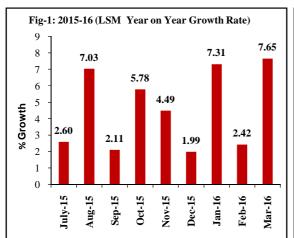
Chapter 03 Manufacturing and Mining

3.1 Introduction

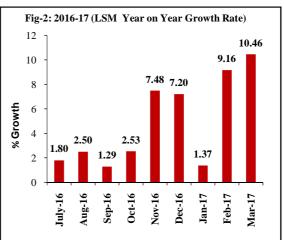
Manufacturing sector is the backbone of Pakistan's economy and constitutes the second largest sector of economy contributing 13.5 percent to Gross Domestic Product (GDP) and generating biggest number of industrial employment with technology transfer. It comprises mainly of Large Scale Manufacturing (LSM) with 80 percent share in Manufacturing and 10.7 percent in GDP whereas small scale manufacturing accounts for 1.8 percent in total GDP and 13.7 percent share in manufacturing. The third component of the sector is slaughtering and accounts for 0.9 percent in overall GDP and its share in manufacturing is 6.7 percent. The overall manufacturing sector continued to maintain its growth momentum with more vigor during the current fiscal year. During FY 2017, it recorded an impressive growth of 5.3 percent against 3.7 percent of last year which helped overall

industrial sector to improve by 5.0 percent against 5.8 percent last year.

During July-March FY 2017, the Large Scale Manufacturing (LSM) registered an impressive growth of 5.1 percent as compared to 4.6 percent in the same period last year. The Year on Year (YoY), LSM recorded significant growth of 10.5 percent in March 2017 compared to 7.6 percent of March 2016. The production data of Large Scale Manufacturing (LSM) received from the Oil Companies Advisory Committee (OCAC) comprising 11 items, Ministry of Industries and Production 36 items and Provincial Bureau of Statistics 65 items have contributed in LSM period average growth by 0.03 percent, 3.97 percent and 1.07 percent, respectively.



The Year on Year performance of LSM sector over corresponding period of last year is given in graph below.



The industry specific data shows that Iron & Steel products recorded highest growth of 16.58 to -7.48 percent (compared percent), Electronics 15.24 percent (compared to -5.69 percent last year), Automobiles 11.31 percent (compared to 23.51 percent last year), Food, Beverages & Tobacco 9.65 percent (compared to 3.77 percent last year), Pharmaceuticals 8.74 percent (compared to 6.85 percent last year), Non Metallic mineral products 7.11 percent (compared to 10.28 percent last year), Paper and Board 5.08 percent (compared to -2.93 percent last year), Engineering Products 2.37 percent (compared to -14.04 percent last year), Fertilizers 1.32 percent (compared to 15.92 percent last year), Textile 0.78 percent (compared to 0.66 percent last year) and Rubber Products 0.04 percent (compared to 9.17 percent last year). The other sectors that showed decline included Wood Product -95.04

percent (compared to -58.09 percent last year), Leather products -17.97 percent (compared to 10.13 percent last year), Chemicals -2.20 percent (compared to 10.28 percent last year) and Coke & Petroleum Products -0.32 (compared to 2.40 percent last year).

In March 2017, highest increased was recorded in Automobiles 20.97 percent, Food, Beverages & Tobacco 20.80 percent, Iron & Steel Products 19.52 percent, Fertilizer 10.00 percent, Pharmaceuticals 7.79 percent, Non metallic mineral product 7.12 percent, Wood Products 4.14 percent, Chemicals 3.23 percent, Textile 2.25 percent, Rubber products 1.65 percent and Paper & Board 0.12 percent.

Group wise growth and points contribution of LSM for the period of July-March FY 2016 versus July-March FY 2017 are given in the following Table-3.1.

Table 3.1: Group wise growth and Point Contribution rate of LSM for the Period of Jul-Mar 2016-17Vs Jul-Mar 2015-16

S.No.	Groups	Weights	% C	hange	% Point Con	tribution
		8		-Mar	July-Mar	
			2015-16	2016-17	2015-16	2016-17
1	Iron & Steel Products	5.392	-7.48	16.58	-0.40	0.89
2	Electronics	1.963	-5.69	15.24	-0.11	0.30
3	Automobiles	4.613	23.51	11.31	1.08	0.52
4	Food, Beverages & Tobacco	12.370	3.77	9.65	0.47	1.19
5	Pharmaceuticals	3.620	6.85	8.74	0.24	0.32
6	Non-Metallic Mineral Products	5.364	10.28	7.11	0.55	0.38
7	Paper & Board	2.314	-2.93	5.08	-0.07	0.12
8	Engineering Products	0.400	-14.04	2.37	-0.06	0.01
9	Fertilizers	4.441	15.92	1.32	0.71	0.06
10	Textile	20.915	0.66	0.78	0.14	0.16
11	Rubber Products	0.262	9.17	0.04	0.02	0.00
12	Wood Products	0.588	-58.09	-95.04	-0.34	-0.56
13	Leather Products	0.859	10.13	-17.97	0.09	-0.15
14	Chemicals	1.717	10.28	-2.20	0.18	-0.04
15	Coke & Petroleum Products	5.514	2.40	-0.32	0.13	-0.02
Source	e: Pakistan Bureau of Statistics (P	BS)				

The Iron & Steel sector recorded a growth of 16.58 percent during Jul-March FY 2017 compared to negative growth of 7.48 percent in the same period last year. The growth in the sector was mainly came from Billets/Ingots 24.86 percent and H/C.R sheets/strips/coil/plats

9.83 percent. The robust construction activities also led to an increase in demand for steel and allied products. The improved energy supply as well as industry gained some comfort after recovery in global prices provided room to local players to increase their prices which ultimately



helped them to enhance their capacity utilization.

performance The of cement remained encouraging and recorded a growth of 7.19 percent which pushed up non metallic mineral product to 7.11 percent during July-March FY 2017 despite negative growth of 1.58 percent recorded in glass plates & sheets. Cement growth derived from robust domestic demand which allowed manufacturers to enhance their capacity utilization. The outlook is encouraging on account of firm demand due to flourishing of housing schemes, rising development spending along with anticipated CPEC related projects.

Electronics witnessed a sharp turnaround of 15.24 percent growth as against a contraction of 5.69 percent during July-March FY 2016. Consumer durables like refrigerators recorded 25.68 percent and deep freezers 45.29 percent which contributed to its improved performance. The increase in consumer financing due to low interest rate environment, foreign investment and better market access for the rural population helped to spur the growth.

The Pharmaceutical industry recorded a growth of 8.74 percent during the period under review on account of growth in injections 18.38 percent, Liquids/Syrups 9.33 percent, Capsules 3.27 percent and Tablets 5.44 percent. The government focus on this sector has helped reduce raw material costs, population growth and launch of new dengue vaccine helped to improve the sector.

The Food, Beverages & Tobacco recorded a growth of 9.65 percent on account of sharp increase in production of sugar at 29.33 percent, which is on account of better sugarcane crop over last year by 12.4 percent, rising domestic prices and wide usage of sugar by product such in power generation as ethanol bv manufacturers. The other items which recorded positive growth are soft drinks which improved by 18.08 percent, juices, syrups & squashes by 8.98 percent, Tea blended by 5.34 percent and Vegetable Ghee by 2.68 percent, respectively.

Automobile recorded growth at 11.31 percent during July-March FY 2017 and its sub sector such as Tractors recorded growth of 72.90

percent, Trucks 39.31 percent, Buses 19.71 percent, Jeeps and Cars 4.68 percent and motor cycles 21.35 percent. During Jul-March, 2016-17, LCVs posted a negative growth of -36.89 percent on account of closure of Apna Rozgar scheme. The new Auto policy favoring new entrant in automobile sector such as Hyundai Motor Company planning to set up a car assembly plant in Pakistan in a joint venture with local textile firm Nishat Mills, French carmaker Renault agreed to invest in a new factory in Pakistan and South Korean carmaker Kia Motor Co would start assembling cars in a joint venture with Lucky Cement. Another pleasing development is the success of Millat Tractors to convert their vintage engine into Euro II and would facilitate the export of tractors immensely. The demand for heavy vehicles increased as the CPEC related activities going forward with the passage of time.

Fertilizers registered a growth of 1.32 percent July-March FY 2017. The production of Nitrogenous Fertilizer posted a growth of 1.46 percent while Phosphorous Fertilizer grew by 0.23 percent. The performance remained slower compared to last year on account of large inventories of last year. Going forward, domestic demand is expected to remain strong in response to government's decision to maintain subsidy along with adequate gas supplies to the fertilizer industry.

The performance of Textile sector having highest weight of 20.91 in Quantum Index Manufacturing (QIM) remained subdued on account of lackluster performance of cotton yarn 0.78 percent and cotton cloth 0.51 percent having a combined weight of 20.15 in textile sector. The production of cotton declined by 29 percent during last year while it recorded an increase of 7.6 percent in FY 2017 along with rise in cotton prices in international market and export bailout package bode well for its performance in future.

The engineering products recorded a growth of 2.37 percent which came from Diesel Engines 154.13 percent, Power looms 12.54 percent and safety razor blade 11.57 percent.



Item wise review of production of selected items of Large Scale Manufacturing during

July-March FY 2017 is given in Table-3.2.

S. No.	Items	Unit	Weight	July-	Mar	% Change (Jul-Mar)	% Point Contribution
				2015-16	2016-17	2016-17	(Jul-Mar) 2016-17
1	Deep Freezers	(Nos.)	0.1622	55,206	80,208	45.29	0.07
2	Jeep & Cars	(Nos.)	2.8183	137,688	144,129	4.68	0.13
3	Refrigerators	(Nos.)	0.2394	1,008,265	1,267,235	25.68	0.06
4	Upper Leather	(000 sq.m.)	0.3924	18,849	19,687	4.45	0.02
5	Cement	(000 tonnes)	5.299	25,912	27,775	7.19	0.38
6	Liquids/Syrups	(000 Liters)	1.1361	79,946	87,403	9.33	0.11
7	Phosphatic Fertilizer	(N tonnes)	0.3996	502,555	503,723	0.23	0.00
8	Tablets	(000 Nos)	1.9143	20,499,188	21,613,529	5.44	0.10
9	Cooking Oil	(Tonnes)	2.2271	285,017	290,859	2.05	0.05
10	Nitrogenous Fertilizer	(N tonnes)	4.0411	2,256,438	2,289,342	1.46	0.06
11	Cotton Cloth	(000 sq.m.)	7.1858	780,233	784,250	0.51	0.04
12	Vegetable Ghee	(000 tonnes)	1.1444	930,676	955,610	2.68	0.03
13	Cotton Yarn	(tonnes)	12.9646	2,552,654	2,572,613	0.78	0.10
14	Sugar	(tonnes)	3.5445	4,949,653	6,401,398	29.33	1.04
15	Tea Blended	(tonnes)	0.3818	105,923	111,577	5.34	0.02
16	Petroleum products	(000 Liters)	5.4096	10,763,001	10,811,086	0.45	0.02
17	Cigarettes	(Million Nos.)	2.1252	42,892	24,678	-42.46	-0.90
18	Billets/Ingots	(Tonnes)	1.5234	2,416,258	3,017,000	24.86	0.38
19	H/C.R sheets/ Strips/ Coils/	(Tonnes)	2.2841	2,354,200	2,585,700	9.83	0.22

A notable decline of 42.46 percent occurred in the production of cigarettes mainly due to closure of cigarettes factory at Mandra on account slow demand as well as annual maintenance of Pakistan Tobacco Company Ltd. The Jute goods recorded a decline of 7.95 percent on account of closure of Pakistan Jute Mills due to financial constraints as well as stoppage of raw Jute from Bangladesh due to political and other reasons. Chip Board Production is nil during the period which dragged wood products growth during the period. It is because one manufacturing unit (Sindh Particle Board Mills Ltd, Kotri) has been closed in April 2014 due to losses and other Pakistan Chip Board (Pvt) Limited Jhelum has stopped its operation since November, 2015.

A host of factors are likely to provide impetus to Large Scale Manufacturing (LSM) such as low interest rate, higher PSDP spending, recently announced incentives for export industries, strong domestic consumer demand and smooth energy supplies.

The production trends of items in Large Scale Manufacturing (LSM) sector during July-March FY2017 compared to same period of last year is given below.





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3.2 Textile Industry

Pakistan has an inherent advantage of being 4th largest producer of cotton in the world with a huge potential to further increase crop yield. For success of any export led industry, local availability of basic raw material is an added advantage being a key factor in reducing cost of doing business. The textile value chain consists of multiple industrial sub-sectors. The value chain is quite long starting from cotton picking to a finished garment of the latest fashion. The end product of one sub-sector is the raw material for the other. Each sub-sector in the value chain contributes to value addition and employment generation. As the change moves downstream, each link creates larger number of jobs with relatively lower investments.

Performance of Textile Industry

Textile is the most important manufacturing sector of Pakistan and has the longest production chain, with inherent potential for value addition at each stage of processing, from cotton to ginning, spinning, fabric, dyeing and finishing, made-ups and garments. The sector contributes nearly one-fourth of industrial value-added and provides employment to about 40 percent of industrial labor force. Barring seasonal and cyclical fluctuations, textiles products have maintained an average share of about 62 percent in national exports. The export performance during the period under review is given in the Table 3.3.

Table 3.3: Export of Pakistan Textiles (US\$ Millions)								Millions)
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
								Jul-Mar
Cotton & Cotton textiles	9755	13147	11803	12628	13348	13139	12168	9112
Synthetic textiles	446	608	546	406	383	331	288	167
Sub Total textiles	10201	13755	12349	13034	13731	13470	12456	9279
Wool & woolen textiles	137	132	121	122	125	119	98	61
Total textiles	10338	13887	12470	13156	13856	13589	12553	9340
Total exports	19290	24810	23624	24515	25131	23885	20802	15119
Textile as % of Exports	54	56	53	54	55	57	60	62
Source: Ministry of Textile	2							-

3.2.1 Ancillary Textile Industry

The ancillary textile industry includes cotton spinning, cotton cloth, cotton yarn, cotton fabric, fabric processing, home textiles, towels, hosiery and knitwear and readymade garments, these components are being produced both in the large scale organized sector as well as in the unorganized cottage / small and medium units. The performance of these various ancillary textile industries is illustrated as under:-

i. Cotton Spinning Sector

The Spinning Sector is the backbone of the Pakistan's textile industry. At present, as per record of Textile Commissioner's Organization (TCO), it comprises 523 textile units (40 composite units and 483 spinning units) with 13.269 Million Spindles and 185 thousand Rotors installed and 11.083 million spindles

and 140 thousands rotors in operation with capacity utilization of 84 percent and 76 percent respectively, during Jul-Mar, 2017.

ii. Cloth Sector

There are three different sub-sectors in weaving viz, Integrated, Independent Weaving Units, and Power Loom Units. There is investment in the shuttle-less looms both in integrated and independent weaving sector. This trend is likely to intensify in the country. The power loom sector modernized and registered a phenomenal growth over the last two decades. The growth of power loom sector is due to favorable government policies as well as market forces. The production of cloth in Mill Sector is reported while the production in Non-Mills Sector is not reported and therefore, is estimated.



Production	July-March 2016-17	July-March 2015-16	% Change
Mill Sector (M. Sq. Mtrs.)	783.250	780.233	0.39
Non Mill Sector (M. Sq. Mtrs.)	6098.220	6091.972	0.10
Total	6881.470	6872.205	0.13
Cloth Exports			
Quantity (M.SqMtr.)	1410.359	1659.455	-15.01
Value (M.US\$)	1581.174	1685.264	-6.18

iii. Textile Made-Up Sector

Being value added segment of Textile industry made-up sector comprises different sub groups namely Towels, Tents & Canvas, Cotton Bags, Bed-Wear, Hosiery, Knitwear & Readymade

Garments including Fashion Apparels. The table given as below compares export performance of made-up sector during the period 2017. Export performance of made-up sector during the period July-Mar FY 2016 is presented in Table 3.5.

	July-March 2016-17	July-March 2015-16	% Change
Hosiery Knitwear			
Quantity (M.Doz)	89.520	85.460	4.75
Value (M.US\$)	1745.663	1746.917	-0.07
Readymade Garments			
Quantity (M.Doz)	24.823	23.704	4.72
Value (M.US\$)	1704.064	1608.717	5.93
Towels			
Quantity (M.Doz)	132.723	135.646	-2.15
Value (M.US\$)	578.024	597.001	-3.18
Tents/Canvas			
Quantity (M.Doz)	33.907	25.989	30.47
Value (M.US\$)	107.053	68.361	56.60
Bed Wears			
Quantity (M.Doz)	263.814	244.295	7.99
Value (M.US\$)	1585.691	1508.609	5.11
Other Made up			
Value (M.US\$)	485.148	471.618	2.87

a) Hosiery Industry

There are about 13372 Circular Knitting Machines, 10646 Flat Knitting and 23241 Socks knitting machines spread all over the country. The capacity utilization is approximately 70%. There is greater reliance on the development of this industry as there is

substantial value addition in the form of knitwear. Besides locally manufactured machinery, liberal import of machinery under different modes is also being made and the capacity based on exports is being developed. The export performance of knitwear during the period under review is given below in Table.3.6.

Table 3.6: Export of Knitwear						
	July-March 2016-17	July-March 2015-16	% Change			
Quantity (000.Doz)	89.520	85.460	4.75			
Value (M.US\$)	1745.663	1746.917	-0.07			
Source: Ministry of Textile						

b) Readymade Garment Industry

Readymade garment industry has emerged as one of the important small scale industries in Pakistan. Its products have large demand both at home and abroad. The local requirements of readymade garments are almost fully met by this industry. Garment industry is also a good source of providing employment opportunities to a large number of people at a very low capital investment. Production of garments by units depends on export orders directly or indirectly. These orders have somewhat risen in terms of value, but they have fluctuated widely in terms of quantity. Generally export earnings from garments have increased significantly. Exports increased from 23.704 million dozens in various types of readymade garments worth US\$ 1608.72 million during Jul-March FY 2016 as compare to 24.823 million dozens worth US\$ 1704.06 million during Jul-March FY 2017, thus showing an increase of 4.72 percent in terms of value and 5.93 percent in term of quantity.

Table 3.7: Export of Readymade Garments						
	July-March 2016-17	July-March 2015-16	% Change			
Quantity (M.Doz)	24.823	23.704	4.72			
Value (M.US\$)	1704.064	1608.717	5.93			
Source: Ministry of Textile						

c) Towel Industry

There are about 10,000 Towel Looms including shuttle and shuttle less in the country in both organized and unorganized sector. This industry is dominantly export based and its growth has all the time depended on export outlets. During Jul-March FY 2017, exports in term of quantity recorded at 132.723 million kg as compared to 135.646 million kg showing a decrease of 2.15 percent. Export performance of towel sector during the period is given below in Table 3.8.

Table 3.8: Export performance of Towel sector					
	July-March 2016-17	July-March 2015-16	% Change		
Quantity (M.Kgs)	132.723	135.646	-2.15		
Value (M.US\$)	578.024	597.001	-3.18		
Source: Ministry of Textile					

d) Canvas

The production capacity of this sector is more than 100 million Sq. meters per year. This sector is also known as raw cotton consuming sector. This value-added sector also has a great potential for export. This sector recorded \$ 107.427 million during Jul-March FY 2017, as compared to \$ 68.361 million in comparable period last year, thus showing an increase of 56.60 percent. In terms of quantity during Jul-March FY2017 it is recorded at 33.907 million kg. as compared to 25.989 million kg. thus showing an increase of 30.47 percent.



The

Table 3.9: Export performance of Tent and Canvas Sector					
	July-March 2016-17	July-March 2015-16	% Change		
Quantity (M.Kgs)	33.907	25.989	30.47		
Value (M.US\$)	107.053	68.361	56.60		
Source: Ministry of Textile	· · ·				

iv) Synthetic textile fabrics

During July-March FY 2017, synthetic textile fabrics worth \$ 166.958 million were exported as compared to \$ 222.114 million showing a decline of 24.83 percent as compared to last year. Even in Quantity term the exports of synthetic decreased by 56.05 percent.

v) Woolen industry

The main products manufactured by the woolen

Table 3.10: Exports of Carpets and Rugs (Woollen)

	July-March 2016-17	July-March 2015-16	% Change
Quantity (M.Sq.Mtr)	1.322	1.372	-3.64
Value (M.US\$)	61.206	74.030	-17.32

vi) Jute industry

The main products manufactured by the Jute industries are Jute Sacks and Hessian cloth,

which are used for packing and handling of Wheat, Rice and Food Grains. The installed and working capacity of jute industry is given in the Table 3.11.

industry are carpets and rugs. During Jul-March FY 2017, carpets and rugs worth \$ 61.206

million were exported as compared to \$ 74.030

In terms of quantity the exports of carpets and

exports of carpets during the period July-March

million showing a decline of 17.32 percent.

rugs also decreased by 3.64 percent.

FY 2017 is given in the Table 3.10.

Table 3.11: Installed and working capacity of Jute					
	July-March 2016-17	July-March 2015-16	% Change		
Total No. of Units	10	10	0		
Spindles Installed	24272	24272	0		
Spindles Worked	13794	12976	6		
Looms Installed	1138	1134	0.3		
Looms Worked	725	568	28		
Source: Ministry of Textile			-		

The production of the Jute goods during July-March FY2017 remained at 41,793 metric tons and last year was 45,402 metric tons, respectively showing a decrease of 8 percent.

3.3 Other Industries

3.3-1 Engineering Sector

Engineering Development Board (EDB) is the apex government body under Ministry of Industries & Production entrusted to strengthen engineering base in Pakistan. EDB focuses primarily on the development of engineering goods and services sector on modern lines enabling it to become technologically sound and globally integrated. Engineering Development Board has so far taken the following initiatives.

CPEC Summit & Expo

Engineering Development Board (EDB) had setup a stall with collaboration of Ministry of Industries and Production in CPEC Summit &



Expo held in Pak China Friendship Center, Islamabad from August 29th to August 30th, 2016, organized by Ministry of Planning, Development and Reforms. MOI&P/EDB stalls were source of attraction for both Chinese and local visitors in respect of information pertaining to the role of MOI&P and its attached organizations with reference to Engineering Industry, Economic Zones and Industrial Parks. Substantial number of Chinese businessmen visited MOI&P/EDB stalls and showed keen interest to have joint partnership with the Pakistani companies. EDB placed promotional/introductory materials of all the attached departments working under MOI&P.

Pakistan at Hannover Messe 2016&17

Engineering Development Board organized Pakistan's Pavilion at the world's largest trade fair of industrial technologies "Hannover Messe-Germany" 2016. Thirty two (32) prominent engineering companies from Pakistan participated in the event. The trade fair presented a wide spectrum of products of top engineering companies in the industrial supply category.

Pakistan's Pavilion was branded as "Vibrant Pakistan" with a theme of "One Nation One Vision". The pavilion was the hub of activities and Pakistani stands were among the most visited stalls due to group participation, quality of exhibits, decor of the stalls and excellent give away items promoted the soft image of Pakistan as an emerging engineering

destination. Besides the visit of hundreds of customers, general visitors, and many delegations/businessmen from the world known technology providers and manufacturers visited Pakistan pavilion. After a successful show at Hannover Messe-Germany 2016. Export Development Fund Board, Ministry of Commerce allowed funding for participation of 50 exhibitors to EDB for organizing Hannover Messe scheduled from 24th to 28th April, 2017. For five days across the packed exhibition ground, 6500 exhibitors from 70 countries were showcasing intelligent robots, 3D printers, solution for industry and highly efficient energy systems. EDB brought Pakistan's best emerging companies to showcase Pakistan's engineering manufacturing products at leading technology fair. Pakistan's delegation comprised five professors from the country's leading engineering universities.

3.3-2 Automobile Industry

In automobile sector, there has been a surge in productions of all its sub sectors. Remarkable growth has been witnessed in Farm tractors which is recorded at 72.9 percent, Trucks 39.3 percent, Jeeps 30.8 percent, two/three wheelers 21.2 percent, Buses 19.7 percent and Cars 4.6 percent during July-March FY 2017 as compared to corresponding period last year, whereas LCVs production declined by 36.9 percent.

Table below shows comparative position of the production during the year July-March FY 2017 and FY2016.

Table 3.12: Production of Automotive Industry No of units produced						
Category	Installed	2015-16	2016-17	% Change		
	Capacity	(July-Mar)	(July-Mar)	_		
Cars	240,000	137,067	143,317	4.6		
LCVs	43,900	29,529	18,637	-36.9		
Jeeps	5,000	621	812	30.8		
Buses	5,000	746	893	19.7		
Trucks	28,500	3,940	5,489	39.3		
Farm Tractors	65,000	21,942	37,938	72.9		
Two/Three Wheelers	2,500,000	998,040	1,209,504	21.2		
Source: Pakistan Automotive M	Source: Pakistan Automotive Manufacturer Association					

Automobile sector is among the top growth sectors in the large scale manufacturing in

Pakistan. As stated earlier, the negative growth in case of Light Commercial Vehicles (LCVs)



resulted from the discontinuation of Apna Rozgar Scheme but was compensated by increased production of other models and growth in tractors and trucks. The trucks production has risen due to economic activity in the country to meet CPEC related material and freight transport needs. There is still enormous potential of growth in buses, given an opportunity to local manufactures by the government and serious measures taken in formulating and implementing urban transport schemes along with replacing the old dilapidated buses presently plying on the roads of metropolitan areas. The cars growth during the period was not up to the mark despite impressive sale of some new models. The factual position is that used cars still hold about 20 percent of the market share. The two/three wheeler sector offers most preferred and economical means of transport and best alternative in the absence of public transport and thus holds considerable opportunity of growth. The figures of two/three wheelers essentially represent the organized sector and leading producers and shall be higher as there are 2/3 wheeler assemblers outside PAMA.

The new auto policy has already been welcomed by the manufacturers as it provides a long term predictable framework. There is strong possibility for market expansion as about one year down the line interest by new players is quite visible to enjoy low entry threshold and avail investment opportunity in the fast growing auto sector and growing economy of Pakistan. The tariff incentives offered to the new comers are unprecedented which indeed is aimed to develop the industry.

The auto industry is also expected to benefit from launch of new models by existing manufacturers, the revival of dormant players Kia motors and Hyundai besides the entry of new players. The new investors are already leading players in cement and textiles besides having interests in this vibrant sector. Some European brands are also studying the Pakistani auto market for establishing manufacturing facilities.

The new entrant policy provides incentives to

the new investors as the condition of matching the localization level of vehicles at par with domestically produced similar models in three years has been extended to five years. The new entrants would be able to import completely built units at concessional duties for five years.

Another pleasing development is the success of Millat tractors to convert their vintage engine into Euro II and it would facilitate the export of tractors immensely.

3.3-3 Fertilizer Industry

The fertilizer industry is an integral part of Pakistan's economy. The Pakistan fertilizer industry produces imports and distributes various types of fertilizers. The government has pursued a policy of supporting the industry in the form of feed gas subsidies, GST relaxation and increasing support prices for commodities.

There are ten urea manufacturing plant, one DAP, three NP, three SSP, two CAN and one plant of blended NPKs having a total production capacity of 8,983 thousand product tonnes per annum. Although, the installed production capacity for all products has attained the level of 8,983 thousand tonnes per annum, the actual production for all products remained at 8,015 and 8,065 (estimated) thousand product tones for 2015-16 and 2016-17 respectively. The entire fertilizer products are manufactured by the private sector.

At present, the installed production capacity (6,323 thousand tonnes) of urea fertilizer is more than the national demand of about 6,000 thousand tonnes per annum. The annual production of urea for 2016-17 is estimated as 5,900 thousand tonnes, which is less by 6.7 percent of installed capacity of urea fertilizer.

The recommended level of fertilizer use in Pakistan for Nitrogen (N), Phosphate (P) & Potash (K) is 2:1:0.5. The government has been endeavoring hard to boost the agriculture sector of economy, for which government has subsidized the nitrogen and phosphate fertilizer under Kissan Package. During current fiscal year FY2017 estimates shows that nitrogen (N) Potash (K) off take has jumped by 33.0 and

82.5 percent while phosphate off take has surged by 23.2 percent respectively, during first nine months current fiscal year as compared with same period last year. The rise in off take of nitrogen and phosphate fertilizer is due to subsidy provided by the government.

The government has allocated Rs. 27 billion as cash subsidy on fertilizer sales in fiscal year budget 2016-17 but it was discontinued as the entire amount was consumed. Later on, Prime Minister of Pakistan directed that cash subsidy on fertilizer would be continued till the end of fiscal year 2016-17. To support the domestic fertilizer industry, the government this year has allowed the export of 300,000 tonnes of urea fertilizer without the subsidy.

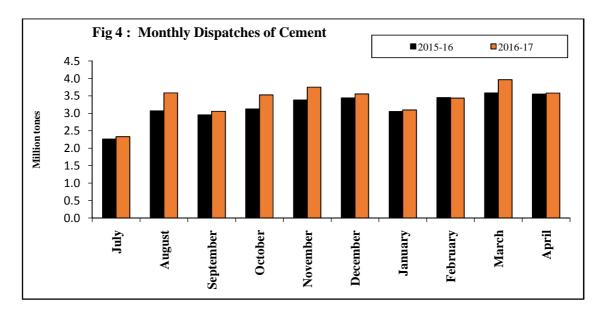
3.3-4 Cement Industry

Cement dispatches reached historic heights in March 2017 touching almost 4 million tons as the factories utilized their full production capacity to meet robust demand in the local market. The ever increasing domestic market has vindicated the manufacturers thrust on adding new capacities. The cement industry is playing its due role to get the momentum going and in April 2017 the industry dispatched 3.576 million tons of cement against 3.551 million tons dispatched during the corresponding month of last year.

In the first ten month of this fiscal year the industry has dispatched 33.880 million tons cement showing an overall growth of 6.21 percent over the corresponding period of last fiscal year. During the period the domestic consumption increased by 10.74 percent but exports declined by 18.63 percent. It is worth noting that the domestic cement consumption during July-April FY 2017 increased by 10.22 percent in the North and by 13.14 percent in the Southern part of the country. In contrast the exports from North declined by 14.42 percent compared with a decline of 26.19 percent in the South. This should be a matter of concern as in the past the South based mills being nearer to sea were leading cement exporters. The capacity utilization during first ten months of current fiscal is 87.64 percent.

The domestic dispatches in April 2017 were 9.53 percent higher than the dispatches in April 2016. The exports in contrast declined by a whopping 50.75 percent. This massive decline in exports reduced the dispatches growth in April 17 to only 0.70 percent. In the first ten months of this fiscal year the domestic dispatches increased by 10.74 percent while the exports registered a decline of 18.63 percent.

Table 3.13: Cement Production Capacity & Dispatches(Million Tonnes)								
Years	Production Capacity	Capacity Utilization (%)	Local Dispatches	Exports	Total Dispatches			
2006-2007	30.50	79.23	21.03	3.23	24.26			
2007-2008	37.68	80.14	22.58	7.72	30.30			
2008-2009	42.28	74.05	20.33	10.98	31.31			
2009-2010	45.34	75.46	23.57	10.65	34.22			
2010-2011	42.37	74.17	22.00	9.43	31.43			
2011-2012	44.64	72.83	23.95	8.57	32.52			
2012-2013	44.64	74.89	25.06	8.37	33.43			
2013-2014	44.64	76.79	26.15	8.14	34.28			
2014-2015	45.62	77.60	28.20	7.20	35.40			
2015-2016	45.62	85.21	33.00	5.87	38.87			
July-April								
2015-16	45.62	83.91	26.97	4.93	31.90			
2016-17	46.39	87.64	29.87	4.01	33.88			
Source: All Pakistan Cement Manufacturers Association (APCMA)								



3.4: Small and Medium Enterprises

Small and Medium Enterprises Development Authority (SMEDA) is the apex organization for development of the SME sector in Pakistan. It has an all-encompassing mandate towards fostering growth of SMEs along with a broad service portfolio spread across various SME sectors and clusters, skill development through training, industry support for productivity enhancement, business development services and collaborative projects with international development partners. Salient activities/achievements of SMEDA during July-March FY 2017 are given below:-

i billbri b Regular Dashless Develophicht Support Ber flees, Research & Haveeuey	i.	SMEDA's Regular Business Development Support Services, Research & Advoca	cy
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Walk-ins facilitated:	Around 5,240 (including PMYBL)
Investment Facilitation:	PKR 137.6 Million (Approx.)
Pre-feasibility Studies Developed:	25(15 new, 10 updated)
Business Plans Developed:	22
Training Programs/workshops	181 programs
SMEDA Newsletter (Quarterly):	3 Issues, containing information on SME
	development initiatives and guidance for SMEs
SME Observer (Bi-Annual):	1 Issue with 5 research articles for policy
	advocacy
SMEDA Research Journal	1 Issue with 5 research papers for policy
	advocacy
Annula Report	Annual Publication
SMEDA Web Portal Downloads	176,875

ii. Special projects with international development partners

a) Industry Support Services

SMEDA in collaboration with various international development agencies such as Japan International Cooperation agency (JICA), German International Cooperation (GIZ), Training and Development Centers of the Bavarian Employers Association (bfz), Germany and local experts, is providing technical assistance to SMEs across a range of industries to upgrade their skills and improve systems. Over 50 international technical experts have been engaged by SMEDA and demonstrated best



practices for improving Productivity & Quality, reducing energy wastages and improving workplace environment of SME sectors. During Jul-March 2016-17, 75 industrial units (33 new and 41 follow-ups) have been the direct beneficiaries of this program in the areas of energy efficiency, productivity improvement, and environment/green productivity. In addition, 11 training workshops/seminars were conducted with international and local consultants on the subject of productivity & quality improvements, green productivity and energy efficiency.

b) Technical support to auto parts manufacturing industry

In order to broaden the scope of productivity and improvement activities across the value chain of auto sector and subsequently improving the share of localization of auto parts, SMEDA in collaboration with JICA has initiated a technical support program of Japanese for improving the productivity and quality. SMEDA's efforts have resulted in the launch of a 4 years project for Technical Support to Auto Parts Manufacturing Industry of Pakistan. The program was launched in collaboration with JICA in FY 2014-15. During this 4 years program, technical support will be extended to 50 auto parts manufacturing units of Pakistan through five (05) JICA technical experts. During Jul-March 2016-17, technical support to 29 auto parts manufacturing units has been provided under the project.

c) Economic Revitalization of Khyber Pakhtunkhwa and FATA (ERKF)

The Multi Donor Trust Fund(MDTF) project 'Economic Revitalization of Khyber Pakhtunkhwa and Federally Administered Tribal Areas (FATA)' is a ioint initiative for both Khvber Pakhtunkhwa and FATA to provide support to SMEs, attract investment, and strengthen institutional capacities to foster investment and implement regulatory reforms. The total cost of the SME development is US\$ 20 million.

Table 3.14: ERKF SMEDA Grant Approval/Disbursement KP only July-March 2016-17						
Components	No of Grants approved	Amount of Grants	No of Grants Disbursed	Amount of Grants		
		Approved (Rs.)		Disbursed (Rs.)		
Rehabilitation	80	67,634,500	78	63,384,500		
Up-Gradation	7	5,621,300	5	4,287,300		
Total	87	73,255,800	83	67,671,800		
Source: SMEDA						

d) Youth Employment Project (YEP)

SMEDA in Collaboration with United Nations Development Program (UNDP) has initiated Youth Employment Project (YEP) provide better self-employment to opportunity to the youth of Karachi. YEP aims to facilitate creation of 500 small enterprises by training the youth in garments sector. The training programs will enable them to develop their small ventures and earn sustainable income. During November 2016-March 2017, 11 training programs with over 500 participants have been conducted.

iii. SME Development Projects under Public Sector Development Program (PSDP)

In Pakistan, lack of infrastructural development and technology are the major constraints that hinder SME productivity and competitiveness. To cope with this challenge and to have a demonstration effect through use of modern technologies, SMEDA has been implementing projects across Pakistan. These projects are Public financed through the Sector Development Program (PSDP). Currently, SMEDA is implementing five (05) PSDP projects at a total cost of Rs. 688.35 million. List of PSDP projects being implemented by



Sr.No	Project Name	Status			
1	Red Chillies Processing Center, Kunri	Operational and providing			
		services to the cluster			
2	Woman Business Development Center, Mingora, Swat	Operational			
3	Establishment of CFC for Honey Processing and Packaging, Swat	Operational			
4	Sialkot Business & Commerce Center, Sialkot	Under execution			
5	Establishment of CFC for Silk Cluster at Mingora, Swat	Under execution			
Source: SMEDA					

SMEDA during July-March 2016-17 is as follows:

iv. Prime Minister's Youth Business Loans

(PMYBL)

- At the launch of PMYBL in 2013, Eighty Five (85) Business pre-feasibility Studies (also translated into Urdu) were developed along with information resources and tools including, FAQs on pre-feasibility studies, Financial Calculators (4), Guidelines/template on developing business plan, and training video documentaries (7) developed on various aspects of business.
- 17.11 million pre-feasibility studies and other tools and resources were downloaded from SMEDA website and 25,077 prospective loan applicants facilitated through SMEDA helpdesks after the launch of PMYBL. (0.53 million downloads were recorded during the period July-March FY2017).
- Information dissemination of PMYBL has been enhanced through SMEDA regular training programs across the country.
- v. China-Pakistan Economic Corridor (CPEC)

The China-Pakistan Economic Corridor offers immense opportunities for achieving Pakistan's development objectives. SMEDA, in this regard, provided policy inputs on draft long term plan of China-Pakistan Economic Corridor (CPEC) to capture key areas to mobilize investment for the benefit for the SMEs sector for both countries. SMEDA proposed 70 direct interventions under 13 economic sectors for fast track development. The proposed interventions are based on SMEDA's 5year SME development plan that has been included in Pakistan Vision 2025. During July-March 2016-17, SMEDA's activities in this area were as follows:

- i. SMEDA facilitated Memorandum of Understanding (MoU) between All Pakistan Business Forum (APBF) and Zhimakaimen Economic and Trading Industrial Zone Management Company Limited, China. According to the MoU, local SMEs will be offered facilities for setting up shops in the centers being developed by the Chinese company.
- ii. Identification of clusters based on regional endowment along the proposed CPEC route (including 100 KM of route).
- iii. Participation in "CPEC celebrations and summit" held on August 29, 2016, Islamabad.

3.6: Mineral Sector

In the wake of the 18th Amendment, provinces enjoy great freedom to explore and exploit the natural resources located in their jurisdiction, with the result that they are undertaking number of projects from their own resources, or in collaboration with federal government or donors to tap and develop these resources.

Pakistan is bestowed with all kinds of resources which also include mineral resources. Pakistan possesses a large number of industrial rocks, metallic and non-metallic which have not been evaluated. The mineral wealth of Pakistan contributes meagerly to its GDP. This is due to application of outdated management techniques, inadequate capital and antique technical know-how besides unsatisfactory law



& order situation in the areas where major bulk of our mineral resources lie.

The Mining and Quarrying sector grew by 1.34 percent in FY 2017 as against 6.86 percent last year. Calcite, Bauxite, Ocher, Sulphur, Chromite, Marble, Coal, Quartz, Gypsum and Lime stone posted a positive growth rate of 138.32 percent, 116.25 percent, 60.27 percent,

55.22 percent, 42.62 percent, 30.14 percent, 22.84 percent, 18.68 percent, 12.69 percent and 8.47 percent respectively. However, some witnessed negative growth rate during the period under review such as Barytes 73.00 percent, Magnesite 57.73 percent, Dolomite 40.93 percent, Soap Stone 6.11 percent, Rock Salt 1.73 percent and Natural gas 0.10 percent (Table 3.15).

Table 3.15: Extraction of Principal Minerals						
Minerals	Unit of Quantity	2014-15	2015-16	2016-17	% Change FY17/FY16	
Coal	M.T	3,406,851	3,749,312	4,605,807	22.84	
Natural Gas	MMCFT	1,465,759	1,481,551	1,480,092	-0.10	
Crude Oil	US B(000)	34,490	31,652	32,258	1.91	
Chromite	M.T	100,516	69,333	98,882	42.62	
Magnesite	M.T	4,611	35,228	14,890	-57.73	
Dolomite	M.T	223,117	716,611	423,296	-40.93	
Gypsum	M.T	1,417,007	1,871,716	2,109,152	12.69	
Lime Stone	M.T	39,819,401	48,296,551	52,386,080	8.47	
Rock Salt	M.T	2,136,361	3,552,984	3,491,691	-1.73	
Sulphur	M.T	19,730	14,869	23,080	55.22	
Barytes	M.T	118,568	157,407	42,506	-73.00	
Calcite	M.T	1,694	1,610	3,837	138.32	
Soap Stone	M.T	100,724	125,330	117,668	-6.11	
Marble	M.T	2,520,170	4,748,715	6,179,867	30.14	
Bauxite	M.T	24,689	57,024	123,316	116.25	
Quartz	M.T	38,016	88,171	104,645	18.68	
Ocher	M.T	33,909	68,352	109,550	60.27	
Source: Pakistan Bureau of Statistics (PBS)						

Punjab:

Punjab, being second largest (area-wise) province of the country, has vast mineral potential like coal, salt, iron ore, limestone, gypsum, silica sand and fire clay etc. The government of Punjab is striving to follow a road map on mineral exploration projects.

- To enhance the contribution of mineral sector to GDP through improved production.
- To expand mining sector by focusing on exploration and evaluation of mineral resources.
- To enhance public sector investment on resource mapping, Geo-database development and provision of physical infrastructure, roads and electricity etc. in

the potential areas.

- To promote facilitation role of the government for the prospective investor.
- To encourage and support exploration of minerals, particularly through private sector.
- To promote environment friendly mining practices and to take measures for mitigation of environmental hazards for sustainable development of mineral sector.

Following achievements have been made by the Government of Punjab.

i. Geophysical Survey of Sub Surface Pre-Cambrian Shield Rocks in Punjab for Metallic Mineral Deposits

Iron ore and metallic mineral resource estimation in Chiniot-Rajoa project led the



mines and minerals department to undertake geophysical survey of the areas where Indian shield rocks are sub-merged in the Punjab plans including the districts Chiniot. Faisalabad. Sargodha, Sheikhupura, Nankana Sahib, Kasur, Hafizabad etc. Geological Survey of Pakistan (GSP) was engaged to undertake the job. It has completed the following scope of work.

- Semi-detailed magnetic survey on 28 topo sheets covering 18000 sq.km area. Total magnetic survey data was recorded using Proton Precession Magnetometer, Geometric G856AX, and after applying necessary corrections prepared 2D contour maps using surfur-11.
- Thirty two (32) anomalous zones of different intensities were discovered,
- Three (3) out of thirty two (32) so far detected anomalies zones were selected for integrated geophysical surveys.
- Gravity, Magnetic and IP surveys on three selected anomalies near Wad Sayyiadan, Ghutti Sayyiadan and Chak Jhumra are completed.

Based on the above geophysical data, further evaluation and resource estimation of the metallic minerals in entire Punjab is underway in a separate project.

ii. Construction of road network to facilitate supply of coal to power plant site

Mines & Minerals Department is responsible for Exploration, Development and Economic Exploitation of Mineral Resources of the province along with the development of access roads to the mining fields. The province is blessed with a resource of 596 million tons coal and about 600 operational coal mines are operational in the province. The condition of above said available road network is not conducive for transportation of coal. In order to facilitate the transportation of coal, the road network from operational mines to the main roads and to the consumer industry is imperative to be improved via roads in the far flung hilly areas.

iii. Underground Coal Mine Survey

Directorate General Mines and Minerals has engaged German Consultant (SST-Fugro) consortium for third party validation of the coal mining survey data collected by the department. The study will cover the following goals:-

- Conduct a mining lease based available coal and/or coaly shales/high carbonaceous shales resource estimation and verify the coal mines survey data through review of existing data and conducting fresh survey of coal mines in Salt Range and Surghar (Trans-Indus) Range; and
- Assess and evaluate as to whether or not the mineable coal resources of Salt Range and Surghar (Trans-Indus) Range are sufficient for supply to the proposed coal based power plants(s) for thirty years.
- As a result of this study total coal resources in the salt range and Surghar range would be determined and its potential to install coal based power plant on indigenous coal resources would be determined uptill mid of May 2017.

iv. Special Economic Zone in Disrict Minawali Near CPEC Western Rout

In Mianwali district, industrial mineral resources of limestone, Silica Sand, Fireclay, Gypsum, Rock Salt are available for installation of industrial units of cement, glass, ceramic and chemical. The CPEC route is passing near Daud Khel-Kalabagh (District Mianwali), therefore mineral bases industrial zone near Daud-Khel interchange (CPEC route) has been proposed. The industrial department has been requested to declare the SEZ as per their SOPs.

v. Installation of Cement Plants at Salt Range

After the completion of study for "delineation of positive and negative areas for installation of cement plants", Directorate General of Mines & Minerals will offer solicited proposal and

process applications for installation of new cement plants in Salt Range to meet the demand of around 105 million metric tonnes of cement in coming four years in wake of CPEC.

vi. Capacity Building & Strengthening of Directorate General of Mines & Minerals Punjab, Lahore

- a. Construction of Office Building and Residence for Deputy Director Mines & Minerals Khushab
- b. Construction of Office and Residences for the Deputy Director Mines & Minerals Mianwali
- c. Construction of Office and Residences for the Assistant Director Mines & Minerals Chiniot

Khyber Pakhtunkhwa

After the implementation of 18th Amendment, a comprehensive legislation is being carried out by the Government of Khyber Pakhtunkhwa to make the mineral sector an inclusive component of the economy as the province has immense mineral resources. Along with the preparation of this province legislation the existing law of 2005 is also being reviewed.

The objective is to harmonize the mineral sector accordance with in the international requirement and also to encourage international investment in the sector. For the financial year 2016-17, the government has planned to extract valuable minerals from Chitral and Kohistan by using modern technology. Under these projects, the government will establish metallurgical industrial centers. The government plans to setup a development center comprising of cutting edge technology for the finishing of marble and granite with the funding from World Bank. With assistance from the World Bank and multilateral donors, road construction projects are also underway so that minerals can easily be transported from mines to metallurgical centers. These projects will also generate employment opportunities and will also help in imparting professional training to the workers employed in these industries.

The provincial government also ensures transparency in excavation and further

processing of the minerals. In this regard, a project is also in pipeline to devise a system so that people can easily get information regarding development, research and investment in the mineral sector. This project will be carried out in line with the international standards of sharing information. In view of the importance of the mining sector for Khyber Pakhtunkhwa economy, five industrial zones are proposed to be set up along the CPEC route in the province.

Sindh

The Sindh Province has large quantities of minerals. In all there are 24 minerals which are being mined at present. Among these province has large quantities of coal and granite reserves. The granite area which was inaccessible has now been connected with Karachi by a network of roads and other facilities like Rest House facility etc.

It is also proposed that a Granite Park will be established at Nagarparkar. Karunjhar range of mountains in Nagarparkar has huge reserves of granite and other rock types of extractable thickness which has the potential to compete the international market. It spreads over vast area and its estimated reserves are around 10 billion tons.

The Directorate of Mines & Mineral Development, Sindh is sponsoring a scheme for study through consultant "Feasibility Study of Granite Deposits in Tharparkar, Sindh'. Previously leases were granted in haphazard manner without any policy.

The department has now constituted a policy for judicious and transparent award of leases in this area. It will be ensured that 03 large granite factories will be set up by year 2030 in this remote area. This will not only generate large employment opportunities for poor and downtrodden masses of this far flung area but will also get world class granite for local consumption and export which will help in poverty reduction and increase in government revenues.

Sindh has the largest coal reserves in the country. It is estimated that around 185 billion



tons of coal reserves are available in Lakhra, East of Indus and Thar. At present percentage of coal in the energy mix, is negligible. The department is in the process of carrying out assessments and exploitation studies of these coal reserves for setting up Power Houses / Projects running on coal.

Balochistan

Balochistan is the largest province (area wise) of the country constituting about 42 percent of the total national landmass. The country, in general, and this part/province of the country in particular, is endowed by nature with substantial mineral wealth. Mineral industry can play an important role in boosting the socio-economic conditions in Balochistan like agriculture in other parts of the country but due attention could not be given to the exploration and development of mineral sector due to financial constraints, heavy risk investment and lack of infrastructure as the deposits are located in remote and far flung areas. Nature has gifted Balochistan with vast natural resources. Efforts are being made for scientific exploration and exploitation of minerals resources. Major mineral potentials are described as under:

1. Metallic Minerals:

i) Chromite

Chromite is found at Muslimbagh, Kharan and Wadh areas in reasonable quantities and variable qualities which are suitable for metallurgical and chemical uses. Pakistan is one of the few countries which have this very useful raw material.

ii) Iron Ore

Several deposits of iron ore have been found in Chagai district of Balochistan. Most of these are fairly rich in iron but small in size. Notable deposits of iron ore occur at Dilband district Mastung, Pachinkoh, Chigendik and Chalgazai in Chagai district.

iii) Copper/Gold

Copper ores are most commonly found in the form of sulphides, carbonates and oxides. Vast resources of copper have been discovered in Chagai district of Balochistan at Saindak, Koh-i-Dalil, Dasht-i-kain, Durban Chah, Kabul koh, Ziarat Pir Sultan and a number of other places.

iv) Lead-Zinc Ore

Lead and Zinc ore are present in nature in the form of sulphides. A number of leadzinc occurrences have been identified in Lasbella and Khuzdar districts. Three of these occurrences, at Duddar, Gunga and Surmai, have been evaluated by the Geological Survey of Pakistan (GSP). Total reserves of lead-zinc, estimated so far, stand at over 26 million tons.

v) Titanium Potential of Ziarat

Recently, titanium metal has assumed great importance and fetches very high price and critical material extensively used for high performance of military and civil aircraft, rockets, missile, electric generating plants. However, only 5 percent of the world annual production of Titanium is used as metal and rest is used primarily to make white titanium pigment. Preliminary investigation by GSP have indicated that laterite zone developed in the vicinity of Ziarat contains over 5 percent titanium oxide along with high iron and Aluminum contents.

vi) Antimony Ore

Antimony ore is found near Qila Abdullah. These occurrences are small and the total estimated reserves are not exactly known.

Non Metallic Minerals: Gypsum

Widespread and large gypsum deposits occur in Sibi, Kohlu, Barkhan and Loralai districts of Balochistan.

ii) Fluorite

Substantial reserves of fluorite are found at Maran, Phad-i-Maran and Dilband areas of Mastung district. The total estimated reserves are about 100,000 tons. Fluorite is presently being mined by open-pit and underground mining methods and production is very small.

iii) Magnesite

Magnesite occurs at Wad in Khuzdar district and Muslimbagh area of Qila Saifullah district. Total estimated reserves are not exactly known. However, the deposits are small. Magnesite is mined by open pit method. On the average about 17000 tons per year is being mined.

iv) Baryte

Huge reserves of baryte are found in Lasbella and Khuzdar districts of Balochistan. Total estimated reserves are over 1.25 million tons. The Khuzdar baryte is being mined by open-pit method. The mining is being carried out by M/S Bolan Mining Enterprise which is a subsidiary of M/S Pakistan Petroleum Limited.