

# CEMENT

Analysis by Projects & Policy Research Department | PBIT | Jan 2019



## C e m e n t   C o n s u m p t i o n   a n d   P o t e n t i a l   o f P a k i s t a n

P r o j e c t s   &   P o l i c y   R e s e a r c h  
D e p a r t m e n t



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# Global Overview of Cement

- Types
- Cement Process
- Global Overview
- Top Cement Producers & Consumers
- Regional Players
- Recent Joint Ventures

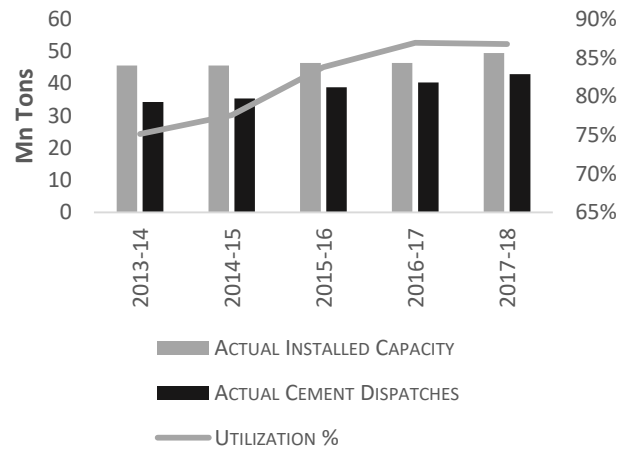
## Introduction

Cement is considered to be the key element in the construction industry, globally. With its directly proportional linkage with the country's economy, cement plays a vital role in upgrading the GDP of a country. The key drivers for cement demand/ consumption growth are infrastructure projects (CPEC) & real estate sector. Around 45% of total cement produced is consumed in Real estate sector. (Increasing urbanization with urban areas having lower number of people per household, keeping this trend rural areas are creating additional demand for housing units). Moreover, Around 45% of total cement produced is consumed in Public development & infrastructure projects. (Large scale infrastructure projects i.e. dams, hydropower plants, Gwadar deep sea port and motorways). The recent growth in domestic cement demand has been complemented by surging exports for the second consecutive months as cement export increased by a whopping 85 percent in March 2018. The exports started improving February 2018 and have continued to improve in March 2018 as well on account of sudden surge to Afghanistan that increased from 0.037 million tons in March 2017 to 0.106 million tons in March 2018. ('Economic Survey of Pakistan')

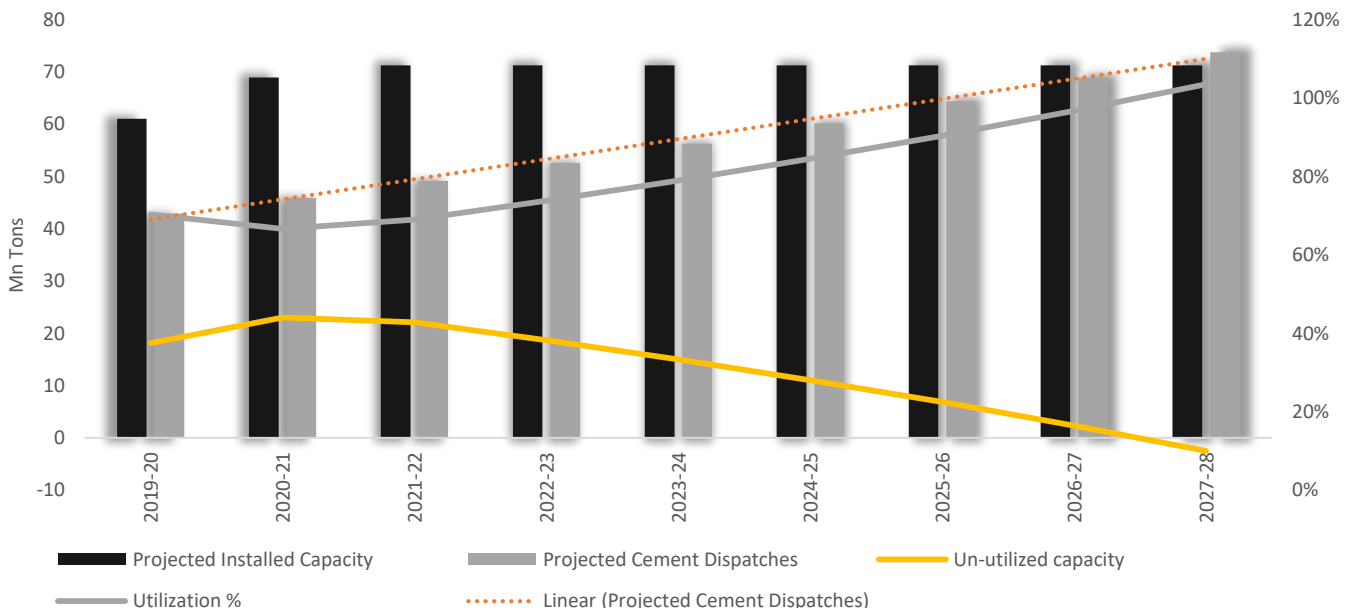
### Cement Demand Breakup



### Actual- Capacity Vs Dispatches



### Projected- Capacity Vs Dispatches



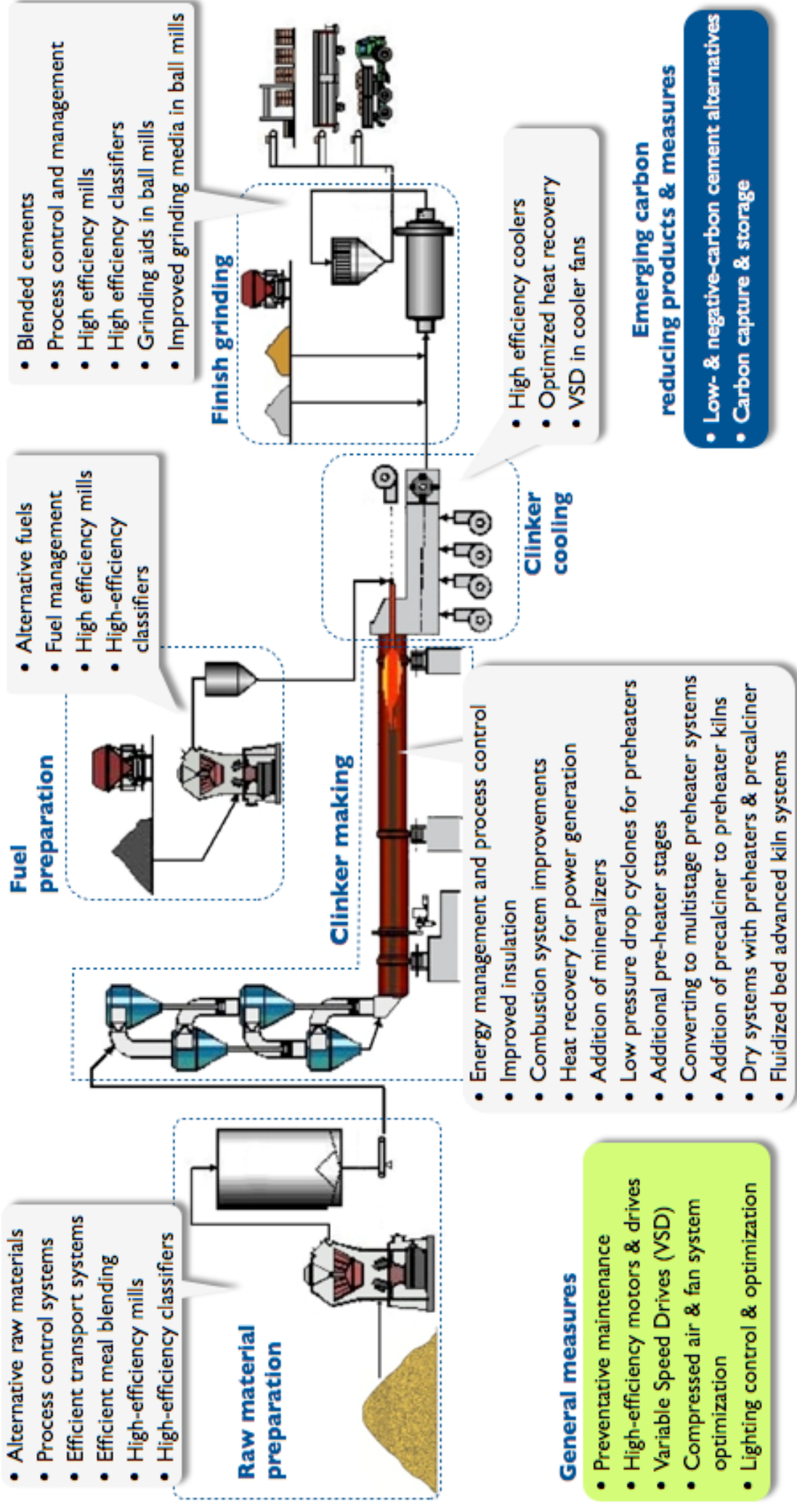
## Types of Cements Produced in Pakistan

The types of special cement now being produced can be roughly classified in the following six categories according to the special purpose for which these have been designed. These are:

1. Rapid hardening cement.
2. Cement resistant to chemical attack of certain soil and aggregates.
3. Low heat of hydration cement.
4. Better protecting cement for steel reinforcement.
5. Better workability and whether resisting cement.
6. Decorative cement and other special cement.



# Cement Process



## Global Overview

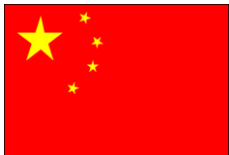
China, along with other sectors, tops the scoreboard of global cement production. The ongoing industrialization and expansion in infrastructure enabled the entire Chinese market experience a 2.5% increase in demand of cement during the year 2016-17. Similarly, with 55% of the global cement market, the areas mapped within Asia-Pacific region claims a high share of cement consumption and production. A total of 159 countries and territories have been recorded to produce cement in integrated cement facility or grinding the clinker. With **China as a top producer with 1.5BnT/Year production**, rest of the world integrates to produce 2.49BnT/Year.

Pertinent to mention about Canada and America, the year 2016 experienced a decline in Canadian market while **USA accelerated with more than 7.4MMT in 2017** which is fine enough to be considered as a fast moving market as statistically, between 2011 and 2019, cement production in the U.S. would amount to about 98 million metric tons. It is being analyzed that global consumption of cement would remain increasing with the increasing development and infrastructural growth in the world. **In China, 804 integrated plants and 57 grinding plants, with a combined capacity in excess of 1.5BnT/yr have been recorded to work in 2017-18.** Succeedingly, India is the second top producer of cement as per its installed capacity recorded in year 2017-18. With its integrated production facilitated by 163plants and 103grinding plants, the total Indian Cement capacity is of 423Mt/Year. With third and fourth rank in the cement table, USA and Russia the production base recorded in 2017-18 were 120.5Mt/Year and 114.4Mt/Year, respectively.

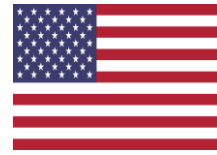
Globally, among the cement producing companies, **Lafarge Holcim tops the cement production with 149 integrated cement plants with a total capacity of 287.3Mt/Year.** The company established in 2015 and owns different plants worldwide.

The residential segment is the greatest cement consumer. There are three major cement-related markets worldwide: residential, nonresidential and infrastructure. Factors contributing to the outlook include changes in population density as rural residents move to more urban settings in developing countries, as well as increases in single- and multi-family residential construction. The rise in urban populations has spurred the demand for residential projects across the globe. The increasing number of projects will drive construction, which will support the demand for cement through 2020.

Source: ([www.polygongroup.com](http://www.polygongroup.com))



China as a top producer with **1.5BnT/Year** production



USA accelerated with more than **7.4MMT** in 2017

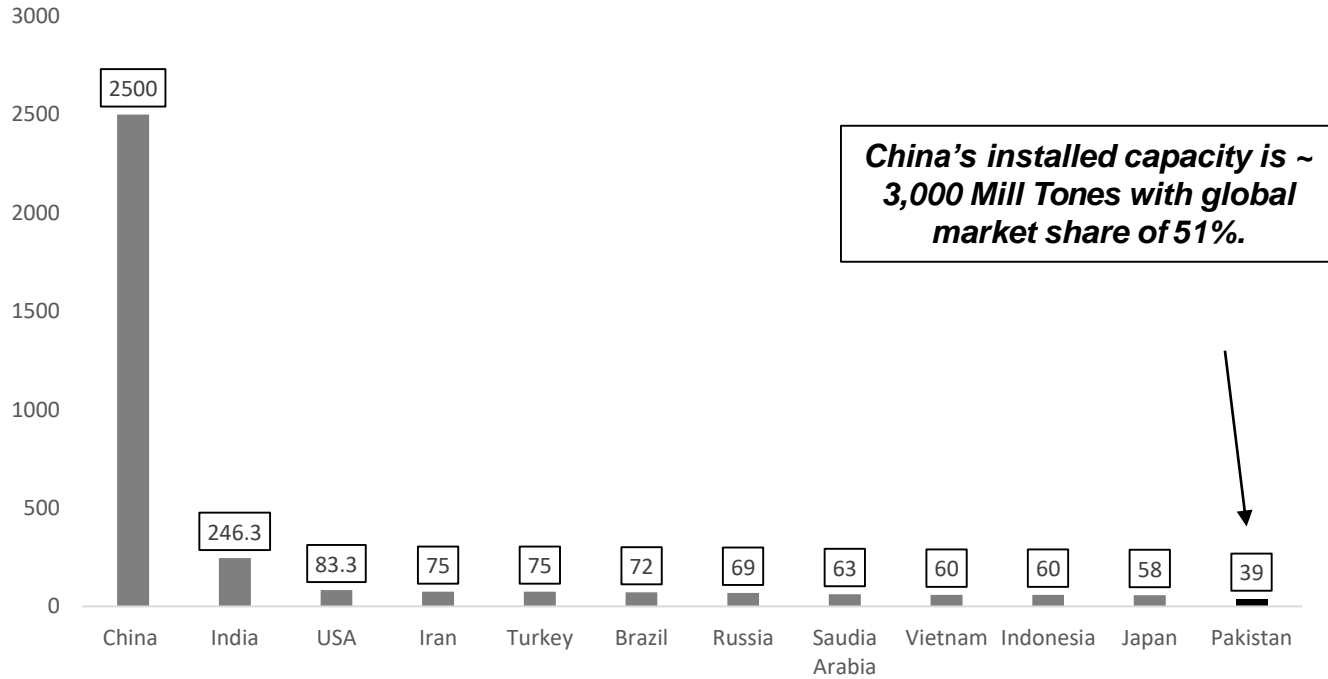
  
**LafargeHolcim**

Lafarge Holcim tops the cement production with **149 integrated cement plants** with a total capacity of **287.3Mt/Year**

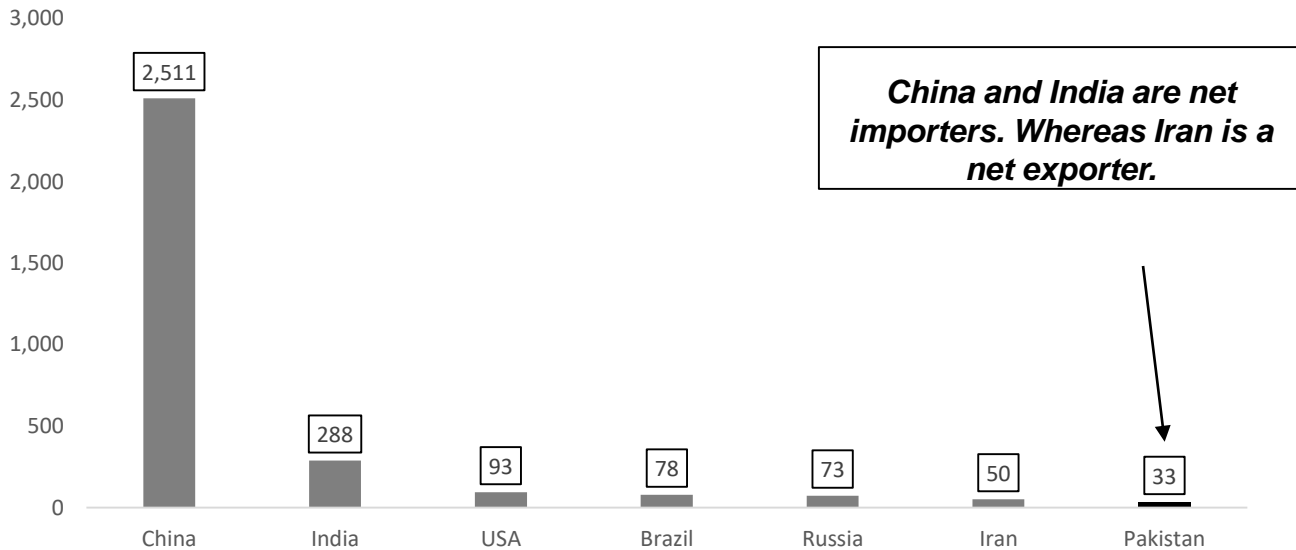


## Top Cement Producers & Consumers

Top Cement Producers (2015) Million Tones



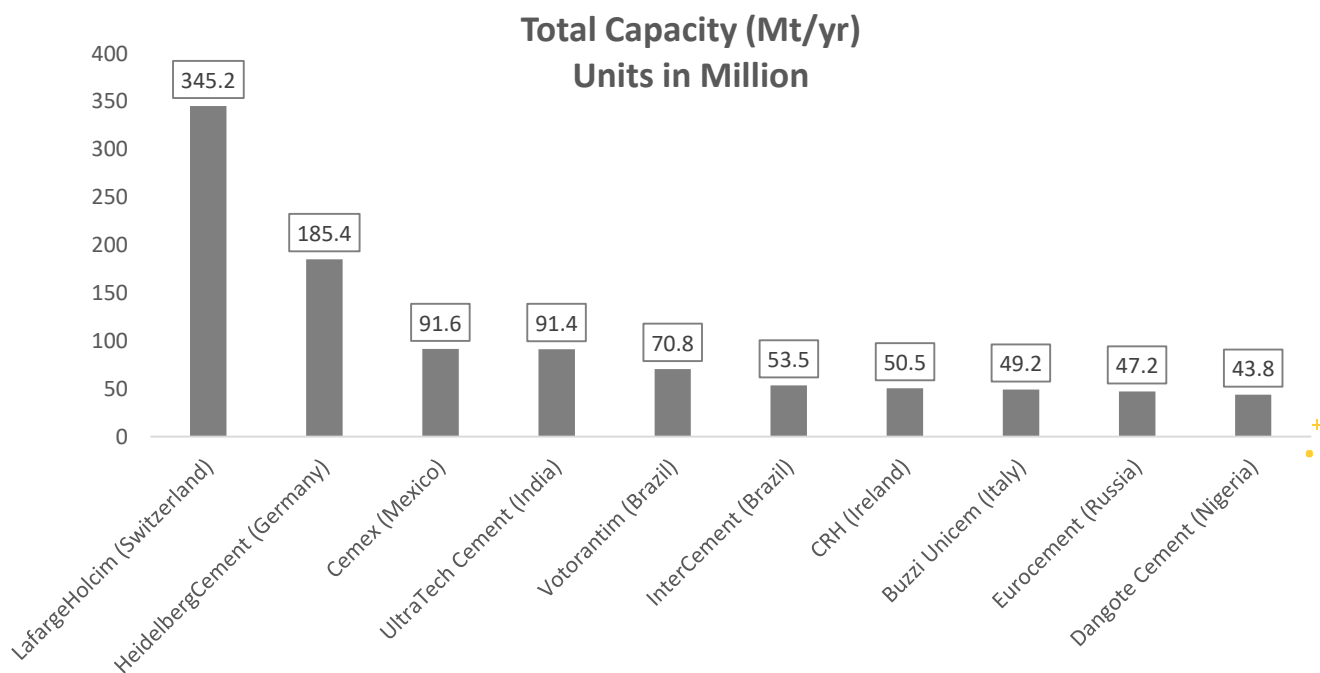
Top Cement Consumers (2015) Million Tones



## Regional Players

Rank	Producer (Origin)	Total		Integrated Total		Grinding Total	
		Capacity (Mt/yr)	Number of plants	Capacity (Mt/yr)	Number of plants	Capacity (Mt/yr)	Number of plants
1	LafargeHolcim (Switzerland)	345.2	220	287.3	149	57.9	71
2	HeidelbergCement (Germany)	185.4	141	159.3	102	26.1	39
3	Cemex (Mexico)	91.6	61	85	52	6.6	9
4	UltraTech Cement (India)	91.4	39	52.2	18	21.6	21
5	Votorantim (Brazil)	70.8	59	60.2	43	10.6	16
6	InterCement (Brazil)	53.5	42	42.8	28	10.7	14
7	CRH (Ireland)	50.5	54	41.9	39	8.6	15
8	Buzzi Unicem (Italy)	49.2	37	46.2	31	3	6
9	Eurocement (Russia)	47.2	19	47.2	19	0	0
10	Dangote Cement (Nigeria)	43.8	12	42.3	10	1.5	2

Source: www.globalcement.com



## Recent Joint Ventures

### Haver & Boecker Starts Joint-venture With Portland Packaging:

Germany's Haver & Boecker has entered into a joint-venture with Southport-based Portland Packaging. Through the joint venture, the Portland Packaging plant will start producing Haver & Boecker products and equipment alongside its own products, retaining the brands of both companies. The German company says that this is the first time a multinational full line packaging company has manufactured product for Africa, in Africa. It will be the minority partner in the joint venture. (Source: <http://www.globalcement.com/news/item/8135-haver-boecker-starts-joint-venture-with-portland-packaging>)

## HAVER & BOECKER



### CSL And SMT Shipping Form Cement And Fly Ash Joint Venture:

CSL Group has agreed to buy 50% of Eureka Shipping, SMT Shipping agreement for CSL to acquire 50% of Eureka Shipping, SMT's pneumatic cement vessel business. The new joint venture will allow Eureka and CSL to expand services to customers in the seaborne cement powder and fly ash transportation markets around the world. CSL's Australian cement shipping business is not included in the joint venture. (Source: <http://www.globalcement.com/news/item/7502-csl-and-smt-shipping-form-cement-and-fly-ash-joint-venture>)



### Cargotec Sets Up Dry Bulk Handling Joint Venture With JCE Invest:

Cargotec has signed an agreement with JCE Invest to establish a joint venture, Bruks Siwertell Group, specialised in dry bulk handling. The new joint venture will own Siwertell and Bruks Holding. Cargotec will own 48% of the shares in Bruks Siwertell Group and JCE Invest will own the remaining share. (Source: <http://www.globalcement.com/news/item/6843-cementos-argos-sets-up-construction-material-waste-recycling-subsiadiary>)



### Cementos Argos Sets Up Construction Material Waste Recycling Subsidiary:

Cementos Argos has set up a subsidiary, Granulados Reciclados de Colombia (Greco), to recycle construction material waste. The new company's operations will be based at its Cota plant in Cundinamarca, according to La Republica newspaper. The operation is expected to process over 1Mt/yr of construction waste material. The company is a joint operation with local industrial conglomerate Fanalca and South Korean lighting equipment manufacturer Daeyang. (Source: <http://www.globalcement.com/news/item/6843-cementos-argos-sets-up-construction-material-waste-recycling-subsiadiary>)



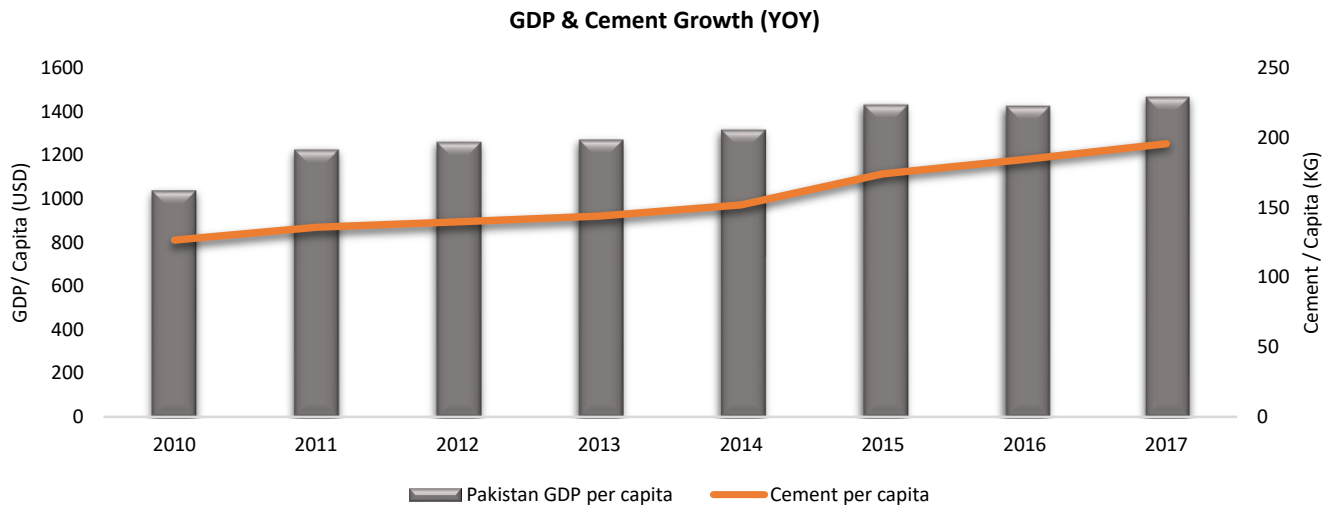


# Pakistan Industry Overview

- Cement Market Projection – Pakistan
- Cement Demand (Forecast 2016-2024)

## Pakistan's Cement Industry Overview

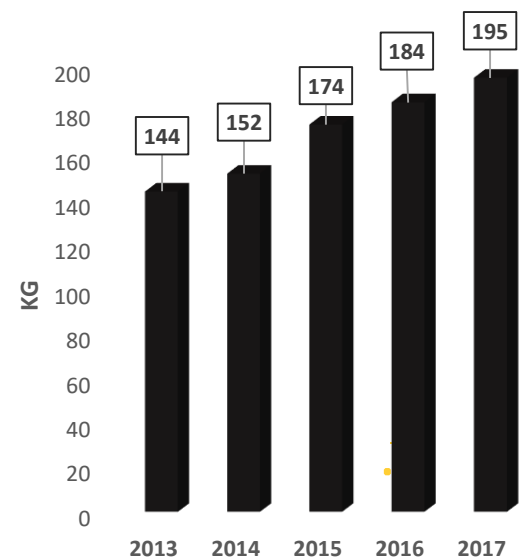
Pakistan has a well-developed cement industry with abundant raw material availability in the country. The country ranks amongst the top 5 exporters and 15th largest cement producer in the world. However, per capita cement consumption at 195kg is on the lower side as compared to most regional peers and vis-à-vis global average of more than 400kg. Lower per capita consumption in the country is reflective of significant room for future growth.



- Strong correlation exists between GDP and Cement demand growth.
- GDP growth (FY 2018): **5.79%**.
- Growth rate of Local cement demand is continuously increasing and depicting **10% CAGR (FY14-18)** about 2x average GDP Growth.
- Given the strong local demand, proportion of local sales in total dispatches has increased from 75% during FY13 to 90% in FY18.
- Decline in proportion of export sales is attributable to imposition of anti-dumping duty on exports to South Africa along with slowdown in dispatches to Afghanistan.
- Threat of imports to local dispatches is also mitigated due to high freight cost of imports from China, also cement from Iran has not been able to make major inroads in the local market due to comparatively lower quality.

*(During the period under review FY2014-2018)*

### Cement Per Capita Consumption



## Pakistan's Cement Industry Overview

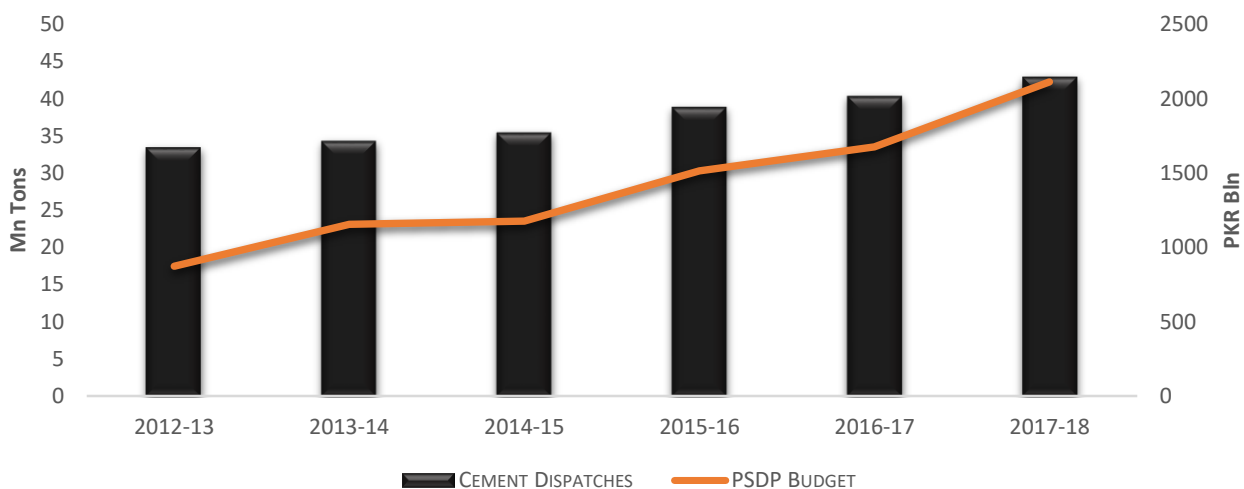
- Higher utilization, strong local demand and healthy gross margins have encouraged cement manufacturers to announce an increase in their capacities. As a result 21.8M tons of capacity will be added between FY18 and FY21.
- Capacity utilization in North is forecasted to remain substantially higher than South. Mainly because currently;
- South Zone accounts for 23% of total installed capacity
- North Zone accounts for 77% of total Installed capacity.

Manufacturer	Expansion/Additions	Location of Expansions	Expected Completion
<b>North zone</b>			
Kohat Cement	2.4	Kohat	Q2 2020
Cherat Cement	2.2	Nowshera	Q2 2019
Maple leaf Cement	2.3	Daud Khel	Q2 2019
Pioneer Cement	2.4	Khushab	Q3 2019
Premier Cement	2.3	D I Khan	Q4 2020
Fatima Cement	3.1	Haripur	Q4 2020
Bestway Cement	1.9	Haripur	Q3 2019
Total	16.6		
<b>South Zone</b>			
Power Cement	2.4	Nooriabad	Q2 2019
DG Khan Cement	2.8	Hub	Q2 2018
Total	5.2		
Total of South & North Zone	21.8		

### Factor effecting future demand/dispatches

- Increased spending on CPEC projects esp. SEZs and Gwadar could provide upside potential to forecasted demand.
- Increased GDP growth foreseen on account of large scale infrastructure projects (Hydropower, roads etc.) and CPEC Projects i.e. Thermal (Coal) powered projects, dams.
- Rapid Urbanization/Population growth. Significant backlog of housing units estimated at 9 million units and announcement of various plans by the government to address this shortfall (*Media releases, election Manifesto*).
- Accompanied by higher demand, retention price of cement also increased from PKR8,420/ton in FY12 to PKR11,200/ton in FY18 (an increase of about 33%).
- Increase in PSDP allocation from PKR873bn in FY13 to PKR2.1tr in FY18.

### PSDP Budget Vs Cement Dispatch

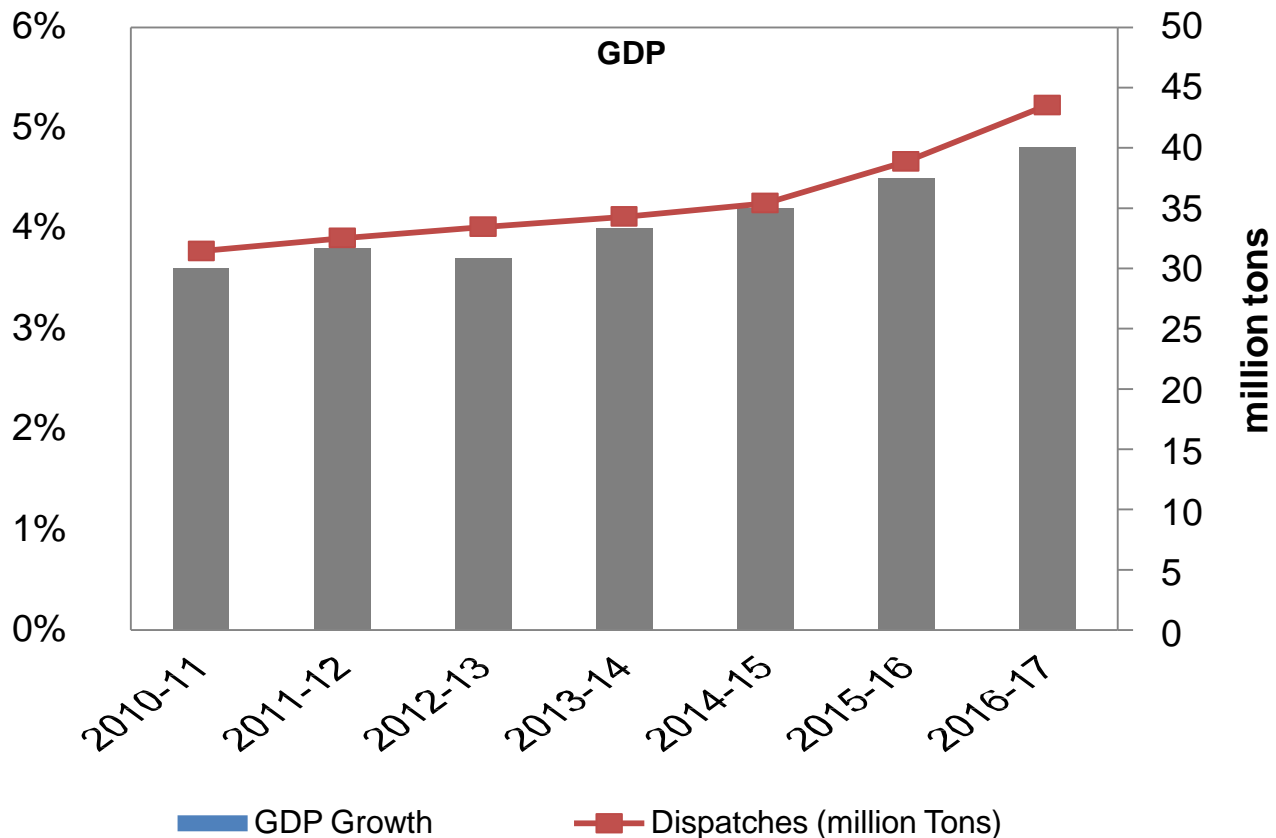
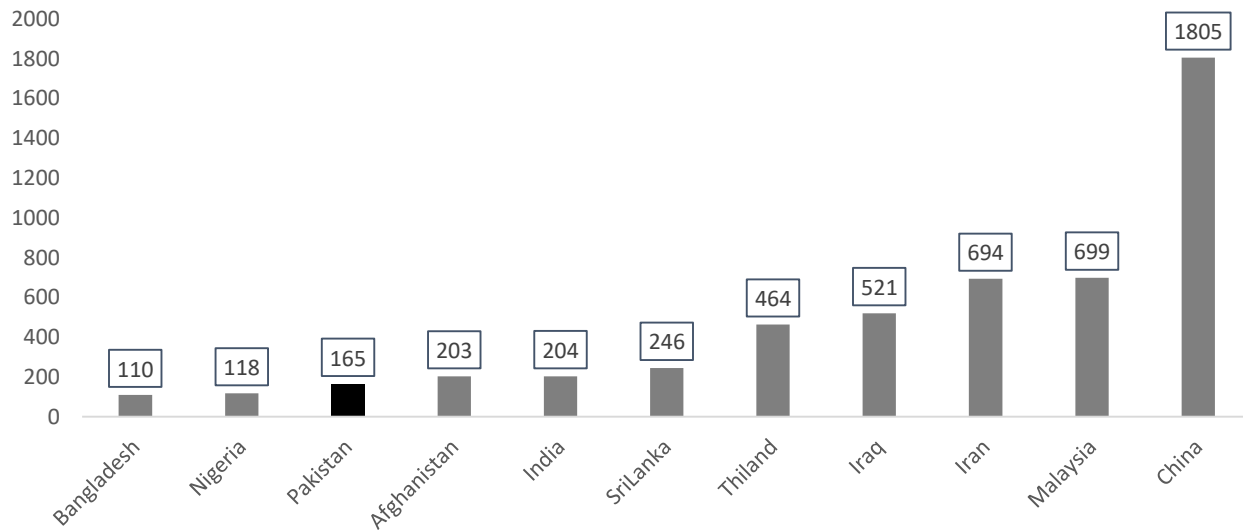


## Cement Market Projection- Pakistan

Per Capita Consumption is very low and is expected to increase due to:

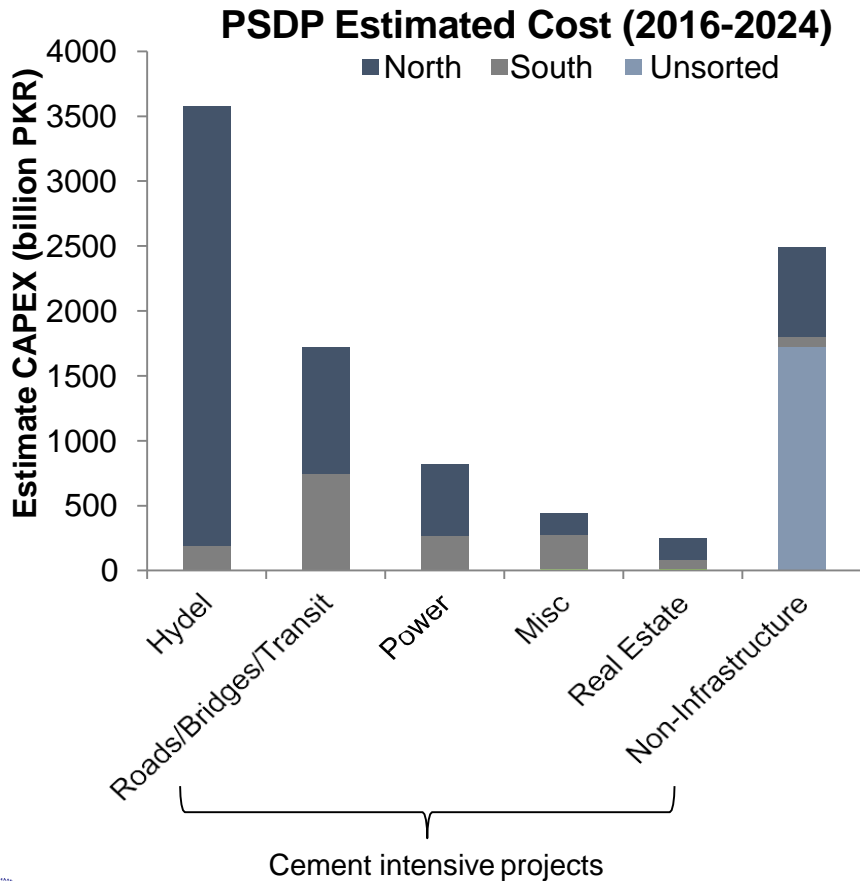
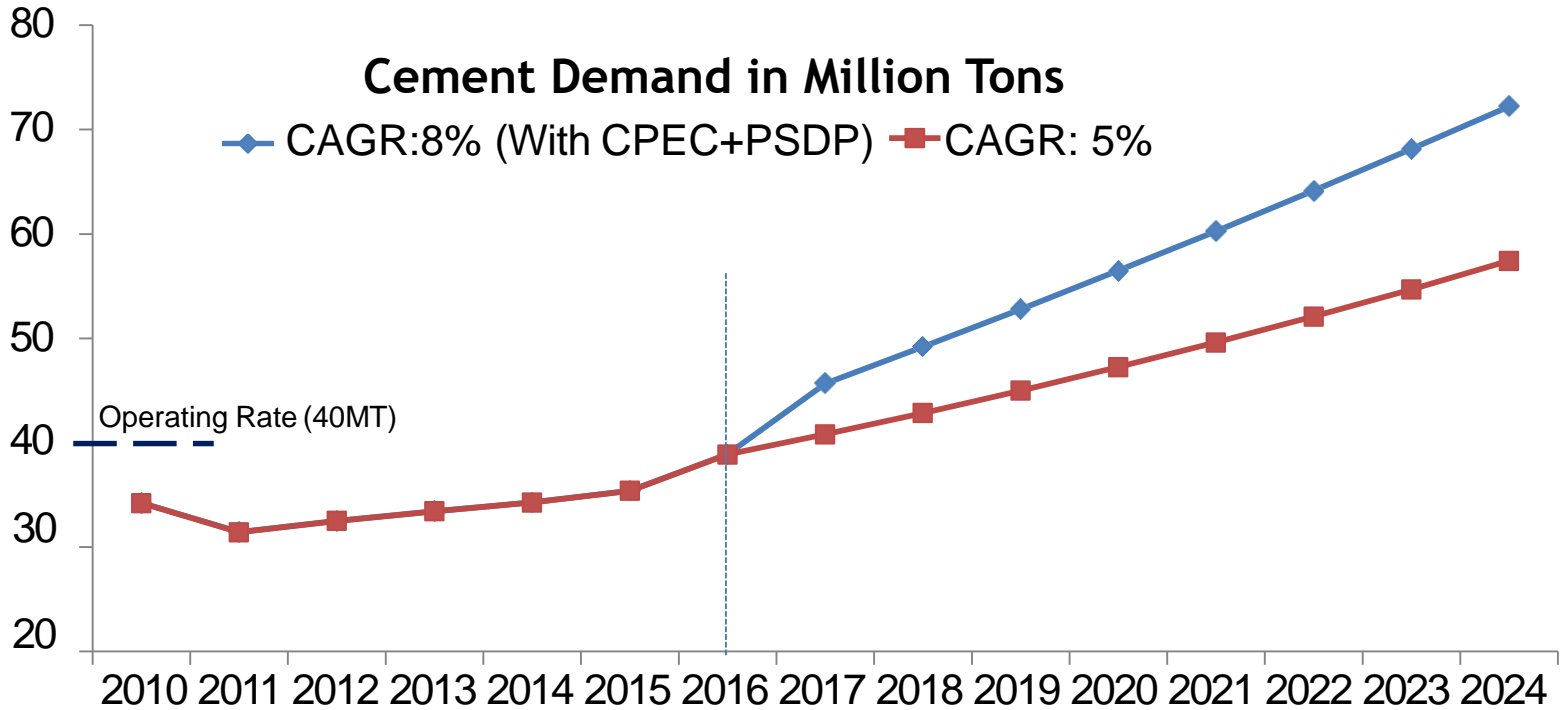
- CPEC & increased PSDP
- Rapid Urbanization/Population growth
- Increased GDP growth foreseen.
- With GDP growth, cement demand is increasing.
- IMF predicted more than 5% growth in GDP

Per Capita Cement Consumption (Kg)



### Cement Demand (Forecast 2016- 2024)

- Cement industry growth rate ~5% (Last 6 yr.)
- Greater than 10% growth expected (CPEC and PSDP projects)

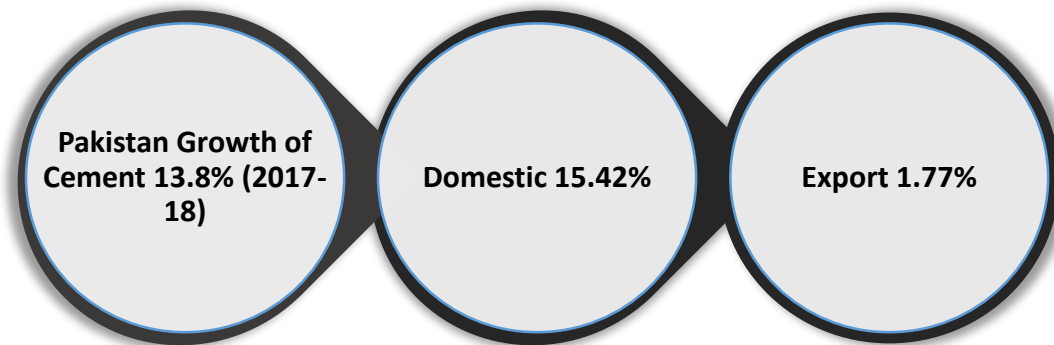


*“Estimated total cost of projects in national development program: 9,286 billion PKR”*





## Case for Investment



The China Pakistan economic corridor, with its entirely deep roots, is creating an environment to strengthen the infrastructure and socio economic growth of Pakistan. The projects being done under infrastructure development would act as the growth indicators of the cement industry in Pakistan. Punjab, being top of the list, has enabled its department and resources to manage the establishment of different projects for cement industry. A chunk from \$46B investment CPEC is as follows:



21 Energy Projects



9 Purpose Built Economic Corridor



Establishment of Gwadar Port



Establishment of Western Route



Road Network Projects of 3032KMs

# Annexure

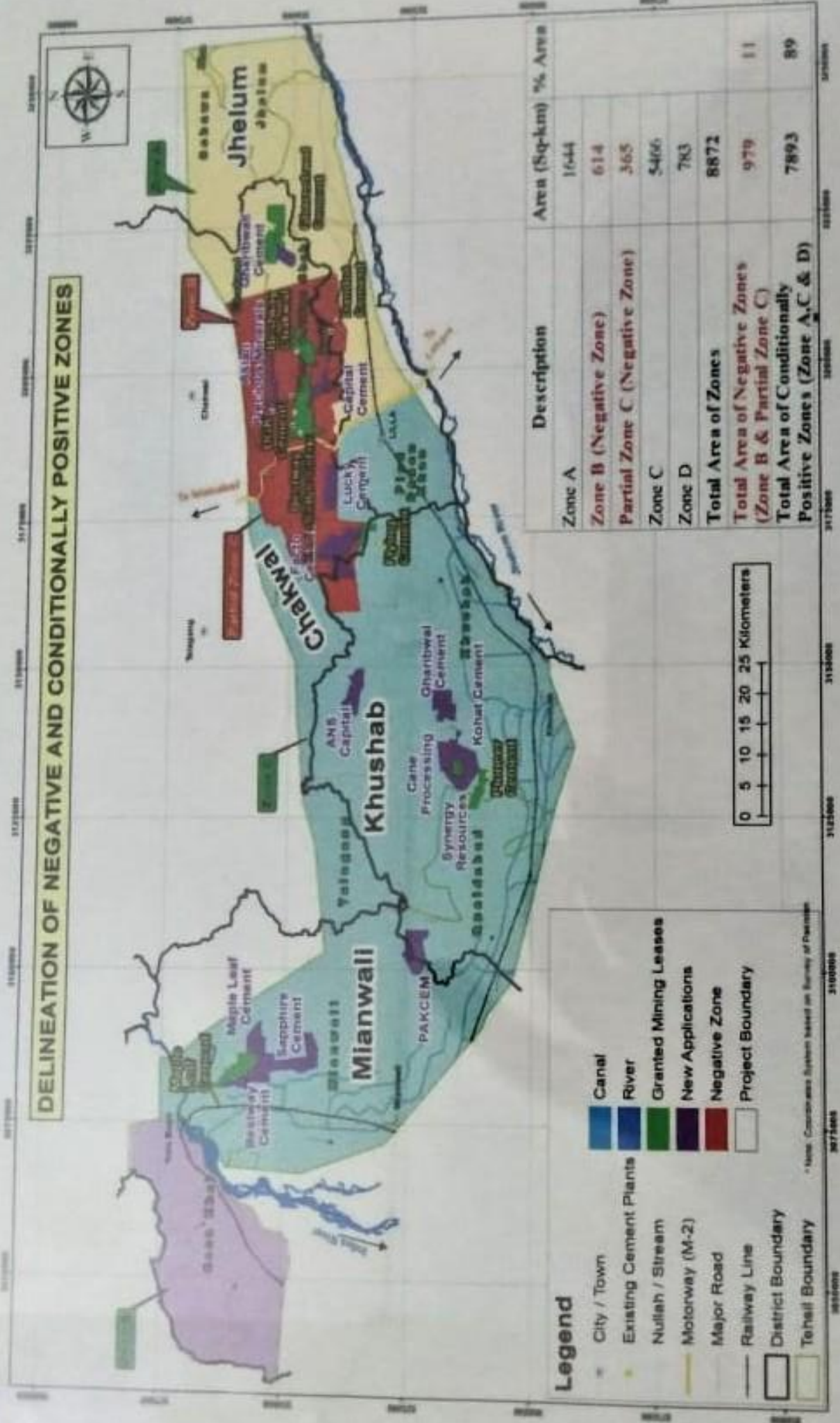


Figure 3: Delineation of Negative and Conditionally Positive Zones



# ABOUT US

Punjab board of investment & trade is a provincial trade and investment promotion agency established by the Government of Punjab in 2009. In today's global economy, trade and investment play an increasingly important role in generating means for transformative change. At PBIT, we strive to ensure that this transformative change is sustainable and more impactful. PBIT is committed to enhancing the global competitiveness of Punjab and its business. To this end, we work to attract new investments in the region and strengthen the existing ones by promoting local investment opportunities, facilitating businesses and highlighting the distinct advantages of Punjab as a business location.

Incorporated under Section 42 under the Companies Ordinance of 1984, Punjab Board of Investments & Trade (PBIT) assists companies which intend to invest in the manufacturing and services sectors of Punjab. The wide range of services provided by PBIT include providing information on the opportunities for investments, as well as facilitating companies which are looking for joint venture partners. PBIT acts as Punjab's marketing arm and actively promotes the province worldwide as one of the best investment hubs in Asia. PBIT as Special Economic Zone Authority Punjab also evaluates the applications/proposals from Developers to declare their Industrial Parks as Special Economic Zones. For granting one time import duty exemption on machinery, equipment, spare parts, consumables in Special Economic Zones, PBIT is responsible to issue a confirmation Letter on the status of the applicant prior to seeking the permission from the relevant department/agencies to claim for the exemption. Investors are always encouraged to discuss their project interests with PBIT officers, wherein Information can be obtained on major public/private projects, prevailing sectoral policy framework, existing incentive regime, financing options, trade statistics etc. Punjab Board of Investment & Trade is a Steering Committee Member and the Director of South Asia at the World Association of Investment Promotion Agencies (WAIPA) - a prestigious world association of organizations similar to PBIT created by UNCTAD.

## Projects and Policy Research Department

Punjab Board of Investment and Trade targets a socio-economic growth through its P&PR. The department plans to fortify its deep roots, both locally and internationally, by reaching out to leading businesses for discussing the panoramic commercial opportunities. As per the initiative of inventiveness, the department plans to provide a transaction advisory as defined in its role to bring-in the investments and establish new businesses. For this purpose, Pitch books of different identified sectors are a new resourcefulness of this department which would target to develop the in-house capacity of production by connecting the local and international market players. This would not only ensure the technology transfer but also create several jobs in the province. The department plans to connect through the regional IPAs, financial institutions, the embassies in different countries and local chambers as well so as to fast-track the process of economic growth and industrialization in Punjab in regard to its recognition as 'The Land of Opportunities

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