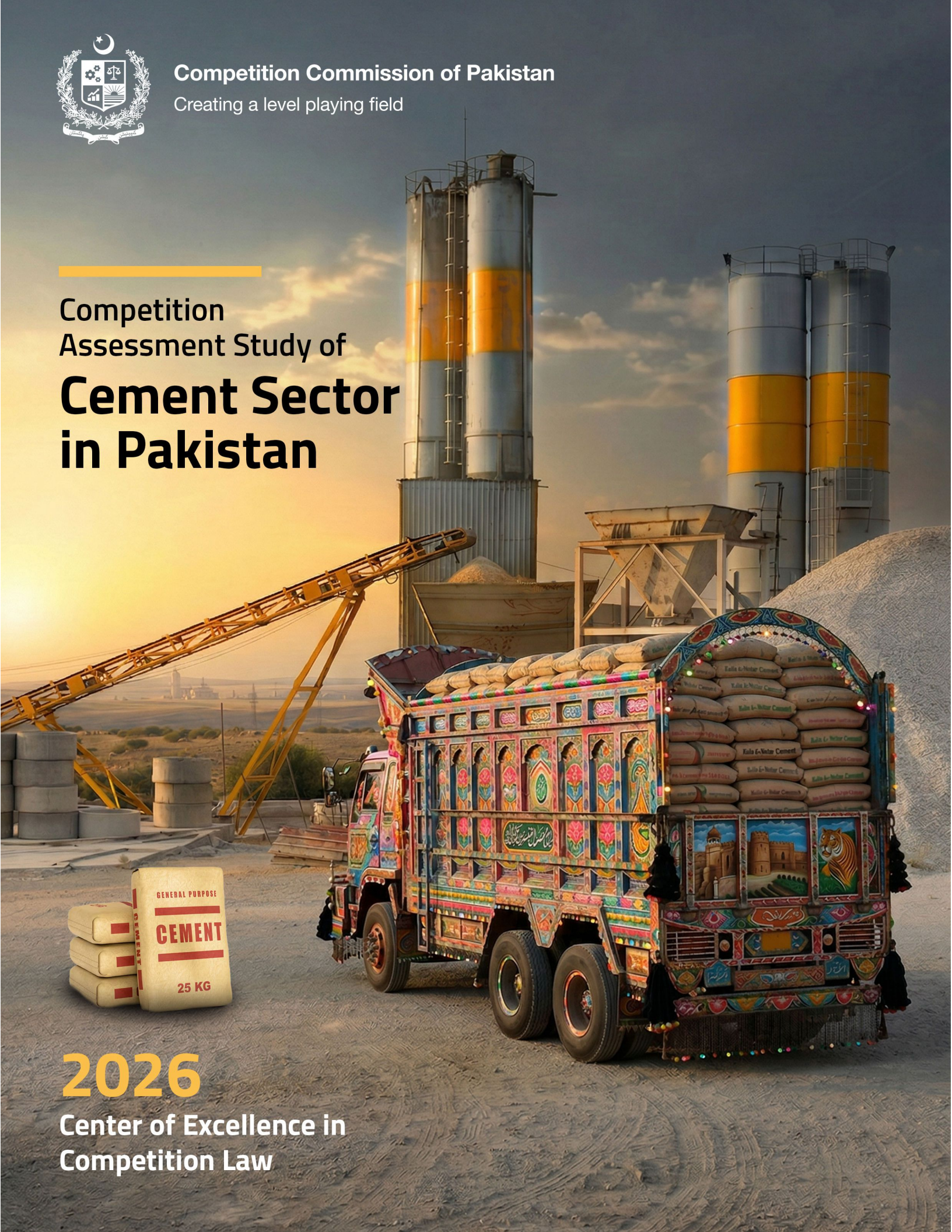
Competition Commission of Pakistan

Creating a level playing field

Competition Assessment Study of Cement Sector in Pakistan



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Center of Excellence in Competition Law

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Foreword

The cement sector plays a pivotal role in the economic development of any nation, and Pakistan is no exception. It is the backbone of several key sectors, including construction, infrastructure, and manufacturing, and is vital for fostering industrial growth and national competitiveness. However, despite its importance, the cement sector in Pakistan faces numerous challenges that undermine its potential to contribute effectively to the economy. These challenges include issues related to competition, market dynamics, and non-supportive regulatory frameworks in certain areas.

The Competition Commission of Pakistan (CCP), in line with its mandate under Section 28(1)(b) of the Competition Act, 2010, is dedicated to ensuring fair competition across all commercial sectors. In this regard, the Centre of Excellence in Competition Law (CECL) has undertaken this comprehensive assessment of the cement sector to analyze the state of competition at various levels of the industry, ranging from raw material to the final distribution of cement products. This study critically examines the existing regulatory environment, identifies the possibility of any anti-competitive practices, and evaluates whether all market players have access to an equitable business environment.

Through this assessment, the CCP aims to highlight any impediments to fair competition and provide actionable recommendations to enhance the competitive dynamics of the sector. By fostering competition, we can ensure that the cement sector in Pakistan thrives, offering quality products at competitive prices, and driving economic growth and job creation. Additionally, this study seeks to raise awareness among policymakers, industry stakeholders, and the general public about a level playing field and the need for pro-competition regulatory interventions.

This study serves as a step towards creating a more competitive, transparent, and sustainable cement sector in Pakistan, ensuring that it can meet the growing demands of the domestic market and enter effectively into the global cement supply chain. From a consumer perspective, the study aims to promote fair pricing, improved product quality, and greater market transparency, thereby protecting end-users from anti-competitive practices.

We extend our gratitude to all stakeholders, who contributed their insights and expertise to this study. Their valuable input has been instrumental in shaping a comprehensive understanding of the challenges and opportunities within the industry.

Chairman
Competition Commission of Pakistan

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List of Acronyms

APCMA	All Pakistan Cement Manufacturing Authority
CAGR	Compound Annual Growth Rate
CCI	Competition Commission of India
CCP	Competition Commission of Pakistan
CECL	Center of Excellence in Competition Law
CMA	Cement Manufacturers Association
CPEC	China Pakistan Economic Corridor
CPP	Captive Power Producers
ECC	Economic Coordination Committee
EIA	Environmental Impact Assessment
FDI	Foreign Direct Investment
FED	Federal Excise Duty
FY	Fiscal Year
GDP	Gross Domestic Product
HHI	Herfindahl-Hirschman Index
IEA	International Environment Agency
KPK	Khyber Pakhtunkhwa
LSM	Large Scale Manufacturing
MCA	Monopoly Control Authority
MMT	Million Metric Ton
MRTPO	Monopoly and Restrictive Trade Practices Ordinance
NEPRA	National Electric Power Regulatory Authority
NHA	National Highway Authority
NWFP	North West Frontier Province
OGRA	Oil and Gas Regulatory Authority
OPC	Ordinary Portland Cement
PACRA	Pakistan Credit Rating Agency
PEPA	Pakistan Environmental Protection Act
PESTEL	Political, Economic, Social, Technological, Environmental and Legal
PIBTL	Pakistan International Bulk Terminal Limited
PIDC	Pakistan Industrial Development Corporation
PKR	Pakistani Rupee
PPC	Pretoria Portland Cement
PQA	Port Qasim Authority
PSDP	Public Sector Development Program
PSQCA	Pakistan Standards and Quality Control Authority
PSX	Pakistan Stock Exchange
QIM	Quantum Index of Manufacturing
SCCP	State Cement Corporation of Pakistan
SOE	State Owned Enterprise
SRPC	Sulphur Resistant Portland Cement
USD	United States Dollar
VRM	Vertical Roller Mills
WHO	World Health Organization
WHR	Waste Heat Recovery
WWF	Workers Welfare Fund
Y-o-Y	Year-on-Year

Executive Summary

1. Pakistan's manufacturing sector has historically served as a cornerstone of economic growth, with Large-Scale Manufacturing (LSM) accounting for approximately 67.5 percent of total manufacturing output and contributing nearly 8 percent to national GDP. Within LSM, the cement industry represents a key industrial component and contributes around 1 percent to GDP annually. In FY25, the sector held a weight of 4.65 in the Quantum Index of Manufacturing (QIM) and recorded a contraction of 1.5 percent, compared to modest growth of 0.94 percent in the preceding year.
2. Structurally, Pakistan's cement industry is divided into Northern and Southern regions, both of which experienced declining consumption during the first nine months of FY2025. Northern region consumption fell to 22.791 million tons from 24.236 million tons (a 6 percent decrease), while Southern region consumption declined by 9.6 percent to 4.671 million tons from 5.166 million tons in the previous year.
3. Despite this recent slowdown, Pakistan's per capita cement consumption remains at 191 kg substantially below the global average of 550 kg, indicating significant untapped demand and growth potential. In this context, ensuring that future sectoral expansion is not constrained by anti-competitive practices remains essential for sustaining efficient market outcomes and supporting broader economic development.
4. Historically, the first cement plant was established at Wah in 1921, and at independence in 1947, four plants with a combined capacity of 470,000 tons per annum were operational. Capacity expansion continued with Pakistan Industrial Development Corporation (PIDC) plants at Daudkhel and Hyderabad in 1956, increasing total units to nine by 1968. During 1971–77, the industry was nationalized under the Economic Reforms Order, 1972, and consolidated under the State Cement Corporation of Pakistan (SCCP). This period was marked by strict regulation, price controls, and lack of private investment, and cement shortages, which led to cement imports in 1976–77.
5. Policy shifted towards denationalization between 1977 and 1988, allowing new public- and private-sector plants, though prices remained SCCP controlled. The industry was fully deregulated in the 1990s, resulting in privatization, private investment, and capacity expansion, with surplus capacity reaching 6.34 million tonnes by 2000. Despite this, the early 1990s saw supply shortages, particularly in the northern region, leading to high prices and continued imports. Growing demand averaging 8 percent annually was supported by economic growth, infrastructure development, and population expansion, prompting the establishment of five new private-sector plants in the North Zone during the mid-1990s.
6. In 2024, the global cement market was valued at approximately USD 423 billion, with production of around 4,000 MMT and consumption of about 3,853 MMT, driven mainly by population growth, urbanization, infrastructure development, and government spending. Housing remains the largest consumer, accounting for 60–65% of total demand. Production

is highly concentrated, with China, India, Vietnam, the United States, and Indonesia accounting for nearly 68% of global clinker capacity. The industry is undergoing structural change, marked by excess capacity, declining utilization rates in Asia, and growing adoption of low-carbon cement, alternative fuels, digitization, and automation. Despite these advances, global overcapacity particularly in China has led to price suppression and plant closures, underscoring structural vulnerabilities in the sector.

7. Globally, the cement industry has attracted continued scrutiny from competition authorities due to its cartel-prone characteristics, including homogeneity of product, high entry barriers, excess capacity, and regional market dominance. Competition authorities in jurisdictions such as South Africa, Germany, India, Türkiye, Spain, Poland, and Brazil have imposed significant penalties on cement producers for cartelization, price fixing, market allocation, and bid rigging. These cases demonstrate the widespread nature of anti-competitive conduct in the sector and highlight the importance of strong enforcement tools such as leniency programs, dawn raids, information sharing restrictions through trade associations, and deterrent penalties to effectively combat collusion.

8. Pakistan's cement industry shares many structural similarities with these jurisdictions and has historically experienced repeated episodes of cartelization. Earlier enforcement efforts by the Monopoly Control Authority (MCA) were constrained by limited investigative powers and weak penalties, resulting in ineffective deterrence. With the introduction of the Competition Ordinance, 2007, the Competition Commission of Pakistan (CCP) acquired stronger enforcement tools, including search and inspection powers and the ability to impose substantial fines. The 2009 cartel case against APCMA and its members, resulting in penalties of PKR 6.3 billion, marked a significant milestone in competition enforcement.

9. The comparative analysis with peer economies shows that Pakistan lags behind in areas such as green cement adoption, export diversification, technological modernization, and policy-led demand creation. International experience underscores the need for sustained competition enforcement, environmental transition, and coordinated industrial policy to enhance long-term competitiveness and market discipline in Pakistan's cement sector.

10. From competition Perspective, the relevant product market is defined as Ordinary Portland Cement (OPC), which accounts for nearly 95% of total cement production in Pakistan, with other cement varieties playing a marginal role. The relevant geographic market is segmented into Northern and Southern regions, reflecting differences in demand patterns, logistics costs, and distribution channels. Cement distribution largely operates through a dealership-based supply chain, with direct manufacturer supply limited to large infrastructure projects. On the demand side, cement exhibits low price elasticity due to the absence of close substitutes and is characterized by derived demand, primarily driven by housing (over 60%) and infrastructure development linked to PSDP spending. On the supply side, the industry is capital intensive, characterized by high sunk costs, economies of scale, low value-to-weight ratio, costly transportation, and limited storage feasibility.

Cost competitiveness is strongly influenced by access to cheaper energy sources, proximity to limestone reserves, and closeness to major consumption centers.

11. The market comprises 16 companies operating 27 plants with a combined capacity exceeding 83 million tonnes, with the top four players accounting for over 56% of total market share. While the national-level Herfindahl-Hirschman Index (HHI) of 1051 indicates a competitive structure, market concentration increases significantly at regional and provincial levels, particularly given the dominance of a few large players operating across both zones and persistent under-utilization of capacity. In this regard, the North region records an HHI of 1222, indicating a comparable competitive structure, whereas the South region shows a higher HHI of 2357, indicating a moderate concentration. Fuel and power constitute the largest component of manufacturing costs, while taxes and duties particularly Federal Excise Duty and Sales Tax collectively account for nearly half of the final cement price, making fiscal policy a major determinant of pricing. Although federal taxes are uniformly applied, provincial variations in mineral royalties create cost differentials across regions. Cement prices are ultimately shaped by a combination of production costs, energy prices, freight expenses, taxation, demand-supply dynamics, and seasonal construction cycles, with international coal price movements and domestic construction activity playing a pivotal role in market outcomes.

12. The report identifies a combination of structural, regulatory, and strategic barriers that collectively constrain market contestability and distort competitive outcomes. Structural factors such as high capital intensity, water scarcity in mineral-rich regions, low shelf life of cement, high transportation costs, and pronounced seasonal demand fluctuations naturally limit entry and expansion. These challenges are compounded by regulatory and policy-induced distortions, including uneven enforcement of axle-load limits across provinces, significant disparities in provincial limestone royalty regimes, monopolistic dependence on a single coal-handling terminal at the port, and a heavy and multi-layered tax burden. In addition, recent levies on fuels used by captive power plants have sharply increased energy costs, undermining industrial efficiency. Weak border controls enabling smuggling and the prevalence of counterfeit cement further erode competitive neutrality, disadvantage compliant manufacturers, and raise concerns regarding quality, safety, and revenue leakage.

13. To address these issues, the report recommends a coordinated reform agenda aimed at restoring competitive neutrality and lowering barriers to entry and expansion. Key measures include promoting mineral sector development to support new capacity, harmonizing axle-load enforcement with logistics modernization, and aligning provincial limestone royalty regimes through a uniform and transparent framework. Introducing competition in coal handling at ports, ensuring tax policy stability through a medium-term framework, and rationalizing energy pricing via cost-reflective and time-of-use tariffs are critical to reducing cost distortions. Strengthened border compliance is essential to curb

untaxed and uncertified imports, while enhanced enforcement against counterfeiting and trademark misuse supported by a clear forum for undertakings to report such practices to the Competition Commission of Pakistan will help protect consumers, safeguard compliant firms, and promote fair competition. Together, these reforms will improve efficiency, investment incentives, and long-term competitiveness in the cement sector.

1 Introduction and Background of the Cement Industry in Pakistan

CHAPTER 1: INTRODUCTION AND BACKGROUND OF THE CEMET INDUSTRY IN PAKISTAN

1. Pakistan's manufacturing sector has remained a cornerstone of the country's economic expansion over time. Within manufacturing, Large-Scale Manufacturing (LSM) plays a dominant role, accounting for 67.5[1] percent of the manufacturing sector and contributes around 8 percent to the national GDP.

2. The Cement industry is classified as a Large-Scale Manufacturing (LSM) industrial component within the industrial sector. It is one of the significant industries of Pakistan, which has a substantial contribution in the economic development of the country and contributes around 1 percent to national GDP annually. In FY25, the sector's weight in the Quantum Index of Manufacturing (QIM)[2] was recorded at 4.65[3] and registered a decline of 1.5 percent during the period under review compared to a growth of 0.94 percent last year.[4]

3. The industry has witnessed a substantial increase in the production capacity that has increased from 45.62 million tons in FY 2016 to 84.58 million tons in FY 2025. The expansion in capacity reflects significant investment and growth potential in the sector. Most of the cement players are listed on the Pakistan Stock Exchange (PSX) and their market structure is categorized as oligopolistic in nature. The infrastructure and development activities are directly influenced by the performance of cement industry alongside other allied sectors.

4. The per capita cement consumption for Pakistan stood at 191kg whereas the world average consumption stood at 550kg indicating a potential for growth in local cement demand. In this backdrop, it becomes essential to be watchful that the impetus to develop is not hindered by the anti-competitive conduct to maximize market share or the profits in a non-competitive way.

1.1. Domestic Overview

5. The cement industry in Pakistan is divided into two zones; namely Northern and Southern regions. During the first nine months of FY 2025, the cement consumption in the north was recorded at 22.791 million tons showing a negative growth of 6 percent as compared to the last year which stood at 24.236 million tons. Similarly, the consumption in the south region was recorded at 4.671 million tons showing a decrease of 9.6 percent compared to 5.166 million tons in the last year.

[1] Pakistan Economic Survey 2024-25 available at: https://www.finance.gov.pk/survey_2025.html
[2] QIM: It is a measure used by the government to track the performance of Large Scale Manufacturing (LSM) industries in Pakistan.
[3] https://www.pbs.gov.pk/sites/default/files/industry_mining_and_energy/qim/2025/Summary%20May25%20Baseyear%20(2015-16).pdf
[4] https://www.finance.gov.pk/survey_2025.html

Table 1: Cement Production Capacity & Despatches (Million Tons)

Years	Production Capacity	Local Despatches	Exports	Total Despatches	Capacity Utilization %age
2015-16	45.62	33	5.87	38.87	85.21
2016-17	46.75	35.65	4.66	40.32	86.23
2017-18	48.61	41.15	4.75	45.89	94.40
2018-19	55.9	40.34	6.54	46.88	83.88
2019-20	63.53	39.97	7.85	47.81	75.26
2020-21	69.14	48.12	9.31	57.43	83.07
2021-22	69.29	47.64	5.26	52.89	76.33
2022-23	72.24	40.01	4.57	44.58	61.71
2023-24	78.9	38.18	7.11	45.29	57.40
2024-25 (July-March)	84.58	27.46	6.53	33.99	52.97
Source: Pakistan Economic Survey 2024-25					

6. Table 1 presents the performance of cement industry for the FY starting from 2015-16 to FY 2024-25. It can be observed that the sector has undergone significant capacity expansion from 45.62 million tons in 2015-16 to 84.58 million tons in 2024-25 shows an overall increase of 85% in the production capacity. However, the capacity utilization has nose-dived from a peak of 94.4% in FY 2017-18 to just 52.97% in the FY 2024-25. This contraction in capacity utilization is attributed to the slowdown in construction activity amid high input costs that have constrained the private sector construction. On the other hand, cement exports recorded a positive trend, reaching 6.53 million tons in FY 2024–25. This growth underscores Pakistan's competitive position in regional and global markets and reflects the industry's strategic shift toward international markets amid subdued domestic demand. During FY24, the value of cement exports was recorded at US $267[5] million, representing an increase of 40.5 percent compared to US $190 million in the preceding year. Afghanistan remained the largest export destination, followed by Bangladesh and Sri Lanka. The table below presents the breakdown of cement exports by product type.

Table 2: Break Down of Cement Exports (FY24)

	Export Value (Million US$)			Export Quantity (MT)		
Commodity	**FY24**	**FY23**	**% Change**	**FY24**	**FY23**	**% Change**
Cement Exports	267	190	40.5%	7,088,982	4,247,740	66.9%
Cement Clinkers	122	70	74.3%	3,792,074	1,845,723	105.5%
White Portland Cement	1.3	1.21	7.4%	13,836	10,894	27.0%

[5] https://www.pbs.gov.pk/wp-content/uploads/2020/07/Annual-Analytical-Report-on-Trade-Statistics-of-Pakistan-FY2023-24.pdf pg.53

Other Portland Cement	143	123	16.3%	3,283,072	2,391,122	37.3%
Source: PBS Annual Analytical Report on External Trade Statistics of Pakistan FY24						

1.2. Historical Developments in the Industry

7. The Cement industry was one of those few industries existing in Pakistan prior to partition in 1947. Owing primarily to abundant reserves of limestone and clay used as an input in cement production. First cement plant was established in 1921 at Wah. There were four cement factories (located at Wah, Karachi, Rohri and Dandot) at the time of independence, with an installed capacity of 470,000 tons per annum. Pakistan Industrial Development Corporation (PIDC) established two plants at Daudkhel and Hyderabad in 1956. During 1948 – 1968, the number of units increased to 9 as the economy started to grow triggering construction activities.[6]

1.2.1 Nationalization of Cement Industry

8. The period from 1971-77 saw various industries of Pakistan being brought under state control under a wave of nationalization. In compliance with the Economic Reforms Order of 1972, all private sector cement plants were nationalized and merged with state owned plants to form State Cement Corporation of Pakistan ('SCCP').[7]

9. During this period, effective price control was also vested with the SCCP and the industry operated under a regime of strict regulation and price control. No new cement plants were established in the private sector during this period, which resulted in acute shortage of cement in the country. For this reason, the government allowed import of cement in the 1976-77, despite Pakistan being rich in all the minerals required for the production of cement.

10. During 1977-88, Government policy shifted towards denationalization and emphasis on housing and construction. To meet the demand, in 80s, seven units with a total capacity of 2.54m tonnes were allowed by the government to be set up in the private sector, and four plants were set up by the SCCP in the public sector. By the end of this period, there were a total of 24 cement plants in the country, but it was not an easy time for the private sector plants. Their prices had to compete with prices fixed by the SCCP, which were on the lower side.

1.2.2 Privatization/ Deregulation of Cement Industry

11. The landscape of the cement industry completely changed in the 1990s era. As the Government was following the policy of economic liberalization set up existing public sector plants for privatization, the SCCP lost its control over the prices of cement. From there onwards, new cement plants were also established in the private sector. Since the

[6] Retrieved from https://www.scribd.com/document/55574822/Cement-Industry-of-Pakistan-An-Insight
[7] Retrieved from https://www.scribd.com/doc/26152245/Cement-Industry-Pakistan-a-Strategic-Analysis

abolition of nationalization in 1990s, an increase of 1.6 Mn tonnes in surplus capacity was witnessed, which further increased to 6.34 Mn tonnes in 2000.

1.2.3 Industry Growth post 1990s Till Date

12. During the early nineties, there was an acute shortage of cement in the country, particularly in the north. Demand could not keep pace with supply and Pakistan was forced to continue importing cement. Importing cement was an expensive affair as it is a heavy commodity, freight and transport charges are often exorbitant. Due to the shortage coupled with high cost of imports, cement prices in the early 90s were high. Demand for cement was growing at an average of 8% a year. The economy also looked as it was heading towards a high growth phase. There was some foreign investment coming in, significant infrastructure development projects were predicted, many independent power producers were cropping up and the population continued to grow unabated. The GDP growth rate was estimated at 6.5% and population growth was at 3.2%. Five new plants were also set up in the private sector during the mid-nineties to meet expected future demand: Pioneer (1994), Lucky (1996), Askari (1997), Fauji (1997) and Bestway (1998). As demand was higher in the north, these five new cements plants were set up in the 'North Zone'.

1.3. Rationale and Objective of Study

13. As per Section 28(1) (b) of the Competition Act, 2010 the CCP is mandated to conduct 'market studies to promote competition in all spheres of commercial economic activity'. The research study on the 'Cement' industry has been undertaken to analyze the state of competition, identify competition vulnerabilities and to present recommendations to enhance competition.

14. This research study reviews and evaluates the 'Cement' industry in Pakistan from a competition perspective. The main objective of the study is to conduct a systematic evaluation of the market structure i.e. the supply and demand conditions; the regulatory framework affecting the supply chain; is to identify, and give recommendations to eradicate barriers to effective competition. This can be in the shape of suggestions for reforming public policy, and an action under the Competition Act in the presence of anti-competitive practices, such as cartelization or deceptive practices by the market players.

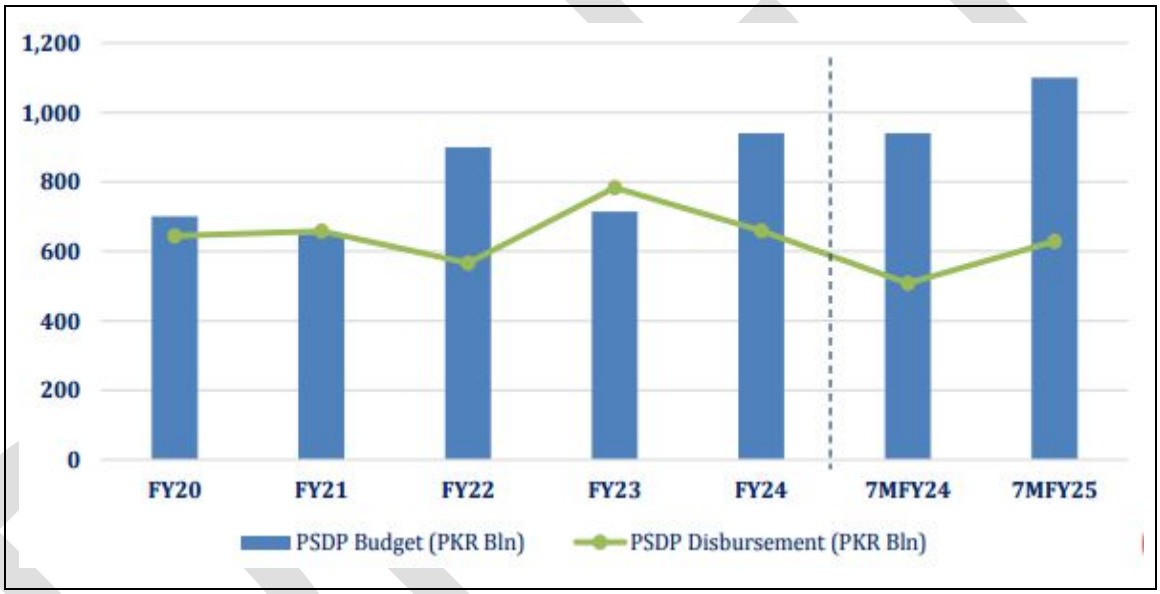
1.4. Significance of Assessing Cement Industry

15. Cement is one of the most essential raw materials in the construction activity. Its significance is on the rise due to national level projects including China Pakistan Economic Corridor (CPEC) and 'Naya Pakistan Housing project'. Cement demand is correlated with infrastructure and construction activities, as most of the public sector projects are spurred by PSDP funds. During FY24, PSDP budget allocation was around PKR 940 billion of

which around PKR 659 billion was disbursed[8]. The budget allocation for PSDP for FY 25 was around PKR 1100 billion of which PKR 596 had been utilized[9].

16. Figure 1 below illustrates the trend of Public Sector Development Program (PSDP) budget allocations and actual disbursements from FY20 to 7MFY25. While the PSDP budget has generally increased over the years reaching to PKR 1100 billion in FY25. However, the actual disbursements have consistently lagged behind the allocated amounts indicating possible delays in project execution or fiscal constraints. Although disbursements show a slight recovery in 7MFY25, they remain below budgeted levels. The persistent underutilization of PSDP funds may adversely affect the timely execution of infrastructure projects, which in turn has implications for sectors such as cement that are closely linked to public development spending.

Figure 1: PSDP Budget & Disbursement (FY20-25)



Source: Pacra cement report 2025

17. Therefore, cement industry has to play a crucial role in the infrastructural development of the country. From a competition perspective, this study attempts to explore the issues being faced by cement manufacturers, and any possibility of anti-competitive conduct in the cement sector in Pakistan. Keeping in view its importance, this study will:

    i. Provide recommendations to improve competition in the sector, for instance highlight the areas for reforms to promote competition through advocacy or enforcement in case of anticompetitive practices;

[8] Pacra Sector Research: Cement April 2025
[9] https://pid.gov.pk/site/press_detail/29299#:~:text=During%20the%20meeting%2C%20a%20detailed,for%20the%20Federal%20PSDP%2C%20Rs.

ii. Identify specific areas to modify policies through Policy Notes, in case of presence of any governmental policies impeding competition; and

iii. Provide information about the industry to the policy makers, industry players and the general public to better understand the dynamics of this industry. This may assist them take well-informed decisions in their respective domains for the development of the industry.

1.5. Methodology

18. Both primary and secondary data were collected from multiple sources to conduct the research on Pakistan's cement sector. Primary data were gathered through meetings and correspondence (letters) with the All Pakistan Cement Manufacturers Association (APCMA) and individual member undertakings, enabling direct insights into industry operations, market dynamics, and competitive practices.

19. Secondary data were obtained from sources including the Pakistan Economic Survey, PACRA reports, and other relevant research publications, providing a contextual and quantitative basis for analysis.

20. For the analytical framework, the study applied several tools to assess the competitive landscape and market structure: Herfindahl-Hirschman Index (HHI) for market concentration, Porter's Five Forces analysis for industry competitiveness, and PESTEL analysis to examine macroeconomic, political, social, technological, environmental, and legal factors impacting the sector.

21. The CECL extends sincere thanks to APCMA and its member undertakings for their support, cooperation, and valuable insights, which were instrumental in the completion of this study.

2 Global Overview and Enforcement Actions in The Cement Industry

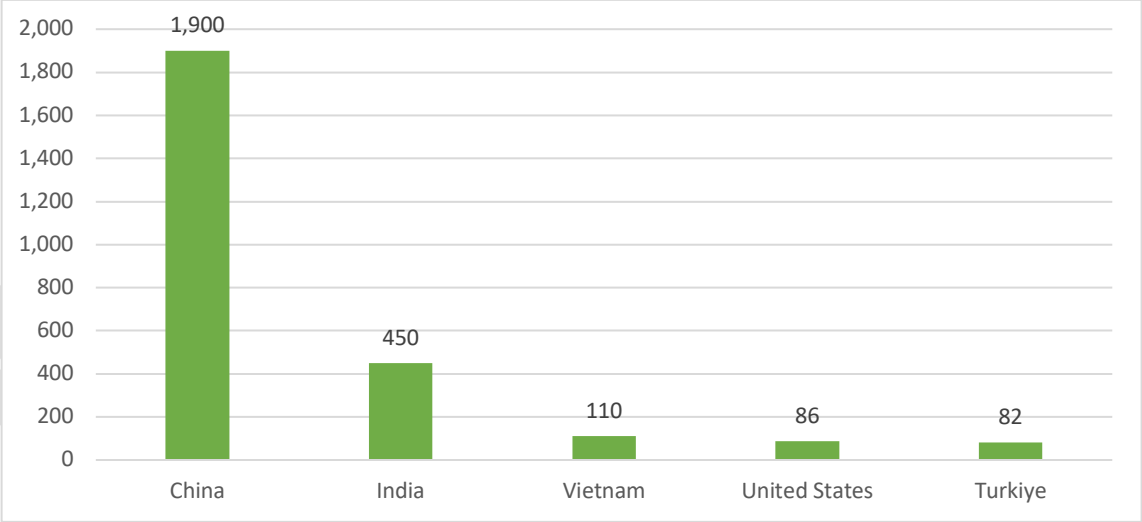
CHAPTER 2: GLOBAL OVERVIEW AND ENFORCEMENT ACTIONS IN THE CEMENT INDUSTRY

2.1. Global Overview

22. In 2024, the global cement market was valued at approximately USD 423 billion[10]. Cement production stood at around 4000 MMT, while the consumption was recorded at around 3853 MMT. The factors contributing to the global cement demand are population growth, rapid urbanization, commercial building and infrastructure, and government spending on infrastructure projects. Housing accounts for around 60-65% to total cement consumption, followed by infrastructure at around 20%, and commercial and industrial segment at about 10% respectively.

23. China, India, Vietnam, the US and Indonesia remained the leading producers of cement in 2024. China's cement production accounts for 1900 MMT[11], making it major cement producer in the world. These top five countries accounts for around 68% of the global clinker capacity. The figure below presents the top cement producing countries.

Figure 2: Top Cement Producing Countries (2024) - MMT



2.2. Global Trade

24. Owing to low value-to-weight ratio, cement trade is regional, with some countries dominating exports. During the year 2024, the global export volumes of clinker and cement stood at around 99.4 MMT. Turkey remained the top exporter of cement with, 14.9 MMT of cement and 6 MMT of clinker. The table below shows the top ten exporters, which together accounted for approximately 68.1% share in global cement exports by volume.

[10] PACRA Sector Study (April,2025)
[11] https://statranker.org/economy/overview-of-global-cement-production-in-2025/

Table 3: Cement Exports by Countries

Country	Cement Export (MMT)	Clinker Export (MMT)
Turkey	14.9	6
China	4.9	0.4
Japan	4.1	3.9
Canada	3.9	0.4
Greece	3.6	0.1
Pakistan	3.4	4.8
Germany	2.9	0.2
Slovakia	2.6	0.1
Ukraine	1.9	0.1
Portugal	1.5	0.1
Source: PACRA Sector Study (April,2025)		

25. On the import side, the USA accounts for the highest volume of cement imports at 23.3 MMT, followed by Philippines with 5.1 MMT. The table below shows the top ten importers, which together accounted for around 70.3% of global cement imports.

Country	Cement Import (MMT)	Clinker Import (MMT)
USA	23.3	0.9
Philippines	5.1	2.7
Hong Kong	3.2	0.3
Israel	3	0.3
Italy	2.8	1.8
Hungary	2.4	0.1
Poland	1.7	0.1
Australia	1.5	3.2
Uzbekistan	1.2	0.1
Romania	1.1	0.5
Source: PACRA Sector Study (April,2025)		

2.3. Enforcement Actions taken in other jurisdictions

26. Globally, the cement industry is often highly concentrated because of the cost structure and high minimum efficient scale of production. Being a heavy and bulky product, it is also expensive to transport, which generates the possibility of local monopolies within specific areas. Thus, it is a market that suffers from limited competition and has been a source of concern for competition authorities in many countries across the world. This section summarizes the experiences of various countries, who have suffered from anti-trust practices in this crucial industry.

South Africa

27. On June 24, 2008, the South African Commission conducted a search and seizure operation on the premises of Pretoria Portland Cement Company (PPC), Lafarge Industries, Afrisam and NPC-Cimpor. This was against a complaint initiated on the 2nd June, 2008 against cement producers and a cement extender Slagment (Pty) Ltd, which was previously jointly owned by all cement companies.

28. The complaint initiation, which triggered the raids was largely based on findings of the Commission's economic research report into inputs used in the government and State Owned Enterprises' (SOE) infrastructure program. It concluded that even though the legally sanctioned cement cartel was disbanded in 1996, the four cement producers still operated in same historic locations, with low levels of competition between them. Cement prices had doubled since 2001, with pricing movements in 'steps' every six months, giving rise to a genuine concern that the high cement prices could be attributable to collusion. Subsequently, PPC applied for leniency and confirmed the existence of a cartel. The Commission also entered into a settlement agreement with Afrisam in November 2011, in which the company admitted cement cartel. Afrisam agreed to pay a penalty of R 124.8 million, representing 3% of its 2010 cement annual turnover.[12]

Germany

29. Bundeskartellamt, the German competition authority imposed fines totaling approx. 660 million Euros on cartel of six German cement manufacturers, Alsen AG, Dyckerhoff AG, Heidelberg Cement AG, Lafarge Zement GmbH, Ready mix AG and Schwenk Zement KG. The companies operated market allocation and quota agreements, some of them since the 1970s, and continued to do so until 2002. Following information from construction industry, the Bundes kartellamt carried out a search of 30 companies in July 2002. This was followed in January 2003 by further searches of eight small and medium-sized cement manufacturers. The successful breaking of the cartel was due to leniency programme of 2000, and the establishment in 2002 of the Bundeskartellamt's Special Unit for Combating Cartels.[13]

India

30. The Competition Commission of India (CCI) imposed a penalty of Rs 6,307 crore on 11 cement manufacturers for cartel leading to high prices and restricting competition. The penalty charged is 50 per cent of the profits incurred in 2009-2010 and 2010-2011. In its order, the CCI observed that the Cement Manufacturers' Association (CMA) may have acted as a platform for cartelization. The exchange of production, dispatch and utilization capacity of different cement plant members is shared through CMA. Hence, 10 per cent of

[12] https://www.compcom.co.za/wp-content/uploads/2014/09/FINAL-MEDIA-RELEASEAfrisam.pdf
[13] https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2003/14_04_2003_Bu%C3%9Fgeld_Zementkartell_eng.html

CMA's turnover for three years (2008-09, 2009-10, 2010-11) which is 0.73 cr is charged as penalty. The CCI prohibited CMA from circulating prices, production and dispatch details of cement manufacturers among their members.

31. In 2016, the CCI imposed a penalty of more than Rs67bn on 11 cement companies for alleged cartelization. CCI held the companies and the CMA responsible for acting in concert in fixing prices. They shared details relating to prices, capacity utilization, production and dispatch, which led to restricted production and supplies in the market hurting consumers and the Indian economy.

32. On January 20th, 2017, The Competition Commission of India (CCI) found seven cement companies guilty of bid rigging and cartelization and imposed a total fine of nearly US$30m on them. The fines are based on 0.3% of each company's average turnover for three financial years. The ruling relates to a tender floated by a Haryana state procurement agency in 2012 that the CCI started investigating in 2014. Evidence cited in the CCI's order includes text messages and phone calls made between officials of the companies.[14]

Turkey

33. The Turkish Competition Board fined 10 undertakings operating in the cement sector in the Eastern Anatolia, Southeastern Anatolia, Eastern Black Sea and Adana regions of Turkey. The undertakings had increased cement prices through an agreement. During its investigation, which began in December 2011, the board conducted on-site inspections (dawn raids) at the undertakings' premises. The board found one particular document of handwritten meeting minutes, as well as travel documents such as hotel reservations and plane tickets, which suggested that a meeting took place in relation to fixing cement prices and sharing customers.

34. The board compared the cement prices of the undertakings following the date on which the meeting took place and, to some extent, found parallels between the prices. Although this could have been caused by natural market conditions, and no further significant evidence of any further communication between the undertakings was found, the board decided that the undertakings had violated Article 4 of the law. The board imposed fines totaling approximately €22m (TRY50m). Six of which have received fines amounting to 2% of their annual gross revenue and four received fines amounting to 3% of their annual gross revenue in FY 2011.[15]

Spain

35. In 2012, Spain's competition watchdog CNC imposed a fine of Euro11.1m on five cement companies, accused of setting up a cartel. Cementos Portland was ordered to pay

[14] https://economictimes.indiatimes.com/industry/indl-goods/svs/cement/competition-commission-of-india-imposes-rs-6307-crore-penalty-on-11-cement-companies/articleshow/14327014.cms?from=mdr
[15] https://www.cemnet.com/News/story/149600/turkish-competition-board-rules-on-cement-cartel.html

Euro5.72m, followed by Beriain with a Euro2.5m fine. Next came Cetya and Vresa with fines of Euro1.14m and Euro0.96m and Cemex España Euro 0.5m respectively.[16]

Poland

36. In 2013, the Court of Competition and Consumer Protection (SOKiK) upheld a decision by the Office of Competition and Consumer Protection (UOKiK) to fine seven cement companies for forming a cartel. However, the SOKiK lowered the total fine from Euro100m to Euro80m. According the UOKiK the cartel fixed prices and divided the Polish market among themselves for at least eleven years. The cartel had almost 100% share of production and sale of grey cement in Poland.

37. During the investigation two cartel members decided to co-operate with the UOKiK in exchange for leniency. Therefore, UOKiK decided not to fine Lafarge Cement and lowered the fine for Gorazdze Cement. The remaining five cartel members were fined to the full legal extent, 10% of annual turnover.[17]

Brazil

38. In 2014, Brazil's antitrust watchdog fined six cement makers a combined US$1.4bn for fixing prices for two decades and ordered the companies to dispose of many assets. The ruling, which followed an eight-year inquiry, came as allegations of local cement sales more than doubled over the past decade and prices jumped by about 66% in that period, following a commodities-based boom and government efforts to expand roads and other infrastructure.[18]

2.4. Enforcement Action Taken by Competition Commission of Pakistan

39. Like many countries around the globe, the cement industry in Pakistan has all the ingredients that make it cartel-prone, namely: (a) it is a mature industry; (b) it has little prospects for innovation; (c) it often exhibits excess capacity vis-à-vis demand; and (d) a homogenous product with scant opportunities for pricing power based on branding.

40. On a number of occasions in the past, the erstwhile Monopoly Control Authority (MCA) took steps against cartelization in the cement industry. However, its efforts were ineffective largely due to a lack of investigative authority and tools necessary to unearth cartels.

First Cartel Case

41. During early nineties, most of the cement plants owned by the State Cement Corporation were privatized. After heavy floods, in October 1992, the first cartel in the cement sector was formed. Demand for cement was greater as compared to the supply. Cement manufacturers raised the price over-night and restricted supply. Monopoly Control

[16] https://www.cemnet.com/News/story/148718/spanish-firms-to-pay-fine-on-northern-cartel.html
[17] https://www.globalcement.com/news/item/18858-polish-competition-authority-launches-cement-cartel-investigation
[18] https://ximang.vn/brazil-fines-cement-firms-us1-4bn-for-cartel-activities-5795

Authority (MCA) examined the pricing pattern, capacity utilization and cost structure. After concluding that the cartel has been formed, recommendations were sent to the Economic Coordination Committee of the Cabinet (ECC). Consequently, the State Cement Corporation, was asked to open retail shops in major cities and to print suggested sale price on the bags.

Second Cartel Case

42. During the latter part of the 1990s, cement manufacturers anticipated growth at around 8% in the domestic demand of cement, expected opening of Central Asian countries' market including probable start of re-habilitation work in rubble-turned Afghanistan. Due to these assumptions, by the start of 1998, cement production capacity was almost doubled. Public sector units, their production and strength to affect market was reduced subsequent to privatization. The projected demand remained stagnant contrary to the above assumptions. The manufacturers again tried to form cartel in February 1998. MCA held discussions, and persuaded a few for not joining the cartel. Thus, the attempt to form a cartel was foiled even without initiating formal proceedings.

Third Cartel Case

43. In October 1998, the cement manufacturers simultaneously and uniformly increased prices (about Rs 100/ bag). Under section 14 of the Monopolies and Restrictive Trade Practices Ordinance (MRTPO), 1970, MCA initiated an enquiry in November 1998 to look into the possibility of cartelization. All Pakistan Cement Manufacturers Association (APCMA), individual units and the user associations were involved in the enquiry. They attributed the increase in price to the increase in cost of inputs, high taxation regime, and an effort by the industry to partly recover huge losses that it incurred due to low prices/ low demand in the preceding years. In their view, it was the only way to sustain units from closing.

44. MCA observed that the input cost did not show comparable increase, there was no increase in furnace oil and excise duty since June 1997; the price of furnace oil was reduced by Rs.800/tonne in June, 1998. There was only a marginal increase in electricity charges in late 1997; and the level of taxation was reduced from 47.5% to 40% (Budget 1997). Except for units which were paying very high financial charges, cost of cement production in all other cases was lower than the prices charged prior to the price hike of February.

45. MCA concluded that the price increase was to unreasonably increase profit margins and was not an economic compulsion. The manufacturers, under tacit agreement increased the price prevailing in the market in early October i.e., Rs.135/bag to Rs.235/ bag in mid-October, 1998. This increase was through cartel formation as per section 6(1)(a). MCA passed an Order on February 20, 1999 as per section 12(c). Accordingly, the manufacturers were asked to break the cartel, reverse the price to pre-cartel level, to remove the restriction on their capacity utilization and to operate at the optimum level. MCA further directed to

utilize full production capacity that was worked out to lower the overhead expenses thus lowering the overall cost.

46. The manufacturers continued to charge a high price, ignoring the judgment of the MCA. Therefore, MCA imposed penalties. The undertakings appealed against MCA's decision in the High Court. Out of 16 only 1 company paid the penalty, others got stay from the High Court.

47. In the meantime, the ECC directed[19] the Ministry of Industries and Production to ensure that cement manufacturers sell their cement at an indicative price of less than Rs. 200 per bag. When ECC reduced the excise duty and directed to sell cement at an indicative price of less than Rs 200 per bag, the High Court disposed of the cases. Thus, the administrative decision of the ECC superseded the decision of the MCA. The Court's decision was:

"The learned counsel for the parties state that the ECC has fixed the new price for the sale of cement which is acceptable to both the parties.''

''The learned counsel states that the appellant shall make its best efforts to produce the cement to the maximum extent and sell it at the agreed price. The learned Deputy Attorney General accepts this position. This appeal along with other appeals on the subject are disposed off in the above terms."

Fourth Cartel Case

48. In 2003, the MCA took suo moto notice of the national press against cement price increase in mid-May. It decided in June 2003 to conduct special enquiry under section 14(1) of the MRTPO. After due process, Orders were issued in October/ November 2005 directing 18 cement factories to break the cartel and reduce cement prices. The cement factories did not report compliance, therefore, penalties were imposed. The cement factories filed appeals in the High Courts of Sindh, Punjab and NWFP. Lahore High Court accepted the appeals and set aside the decision of the MCA.

49. The Court was of the view that the MCA had no authority to control the prices of cement, thus, issuing the Order of reducing the price was beyond its jurisdiction. The Court ruled that if a mere change in prices was sufficient to spell out a cartel then the whole matter would be at the unfettered discretion and sweet will of the MCA and it could condemn a price movement or leave it undisturbed as a market condition. If the Authority was allowed to take action at any time there is a price change unacceptable to it (on the basis that such a price change can in and of itself establish a cartel), then there would essentially be no difference between the power exercised by the Authority under the Ordinance, and the power exercisable by the Federal Government under the Price Control and Prevention of Profiteering and Hoarding Act, 1977 to regulate prices. The Court stated that the Authority

[19] ECC's Decision: Case No. ECC – 56/07/99 dated 15.04.1999.

has purported to fix the price of cement for each manufacturer by requiring it to reduce its price, as prevailing on the date of the order by the amount specified in the order. This is nothing other than price fixation or regulation, which is beyond the scope of the Ordinance. The impugned orders were set aside.

Cartel in 2007

50. Newspapers as well as the data received from the then Federal Bureau of Statistics (FBS) reported increase in cement market price. According to these sources, cement market price increased from Rs 220/230 to Rs 275 - 300 per bag of 50 kg during first week of February 2007. In the meantime, the Cabinet directed the Monopoly Control Authority (MCA) to investigate the reasons for upsurge. A report in this context was submitted to the Cabinet. However, MCA considered it imperative to conduct Special Enquiry as per Monopolies and Restrictive Trade Practices (Control and Prevention) Ordinance, (MRTPO), 1970. MCA's four-member Committee called information/ evidence from general public; held hearings involving industry stakeholders and examined witnesses on oath under the provisions of the MRTPO, 1970. No conclusive evidence was found regarding cartelization in 2007, however, there were indications that cement manufacturers were involved in cartelization in the past. The enquiry report concluded:

- "Essentially, it is true to say that the CCP did not find conclusive evidence to indicate that the price hike in February 2007 was the result of cartelization. This conclusion was in line with the Lahore High Court ruling in 2006 that the existence of a cartel needs to be established through much more rather than by merely associating it with the phenomenon of parallel price movements and that the support of corroborating plus factors are necessary to prove collusive price fixing. However, such direct evidence can only be found through the physical search of premises of APCMA, the admission of a member of the alleged cartel, an estranged executive of a member company or of APCMA itself or a so-called 'whistle blower'.
- Due to the limitations of the 1970 Law, the MCA could not conduct a search of APCMA premises. Under the new Competition Ordinance, the CCP is now empowered to not only conduct searches but also impose punitive fines if evidence of industry collusion is conclusively found. Given these powers, as far as APCMA is concerned and the doubts that have been expressed about it in different quarters, its activities clearly need to be thoroughly examined, including through the search of its premises. Is it as benign in its functions as is made out by itself or does its 'monitoring' have another, less savory purpose?"

51. From the above, it is clear that the cartelization in the cement sector remained a major area of concern. However, MCA's efforts were hampered due to non-availability of legal provisions with respect to leniency and premises inspections - the most effective tools in the fight against cartels. Cement manufacturers made several attempts to cartelize. Two reasons given on each occasion to justify price increase were; (i) increase in cost of inputs;

and (ii) lower utilization of production capacity due to decreased demand. Interestingly, these reasons remained unsubstantiated by them. The MCA was of the view that the recurring emergence of the cement cartel was because the manufacturers felt it easy to indulge in this restrictive business practice due to the absence of any strong deterrent provision in the law i.e. the penalties in the MRTPO.

52. Considering that the anti-monopoly law of 1970s was replaced by a more powerful Competition Ordinance, 2007, therefore, the CCP sought to get hold of irrefutable evidence of cartel activity and to take action as per new law. It is very interesting to note here that as per its first memorandum of association, one of its aims and objectives of APCMA was "To create an understanding amongst the Private Sector Cement Manufacturers of Pakistan ….to avoid under cutting in the sale price." It was therefore considered necessary to look into the activities of the APCMA. In early 2008, the CCP received somewhat clear indications of cartel-like activity on the part of All Pakistan Cement Manufacturers Association (APCMA). On 20 March 2008, a news item appearing in the daily 'Jang' and on the website of 'Geo News' revealed that the price of cement was raised by Rs.15 to Rs.20 per bag across the country. After considering all aspects, the Commission decided in April, 2008 that the only prudent and effective step in order to get hold of conclusive evidence was to conduct a surprise inspection of APCMA, which was ordered after due process and in accordance with law. APCMA chose to obstruct this inspection in a variety of ways including harassment and intimidation of CCP's inspectors by a large number of people (including armed persons). Later, two members of the Commission authorized forcible entry under Section 35 of the Competition Ordinance, 2007.

53. After examination of the impounded data, the CCP issued show cause notices to the APCMA and its members in October 2008. The show cause notice was issued under Section 30 of the Competition Ordinance, 2007 to APCMA and all its members for entering into an anti-competitive agreement, which is prohibited in terms of Section 4 of the Ordinance.

54. After due process under the Competition Ordinance, 2007, the CCP passed an Order on August 27, 2009. According to details, the evidence recovered during inspection included a 'marketing arrangement' agreement entered into by the cement manufacturers on 8th May 2003. The Agreement contains such clauses/rules by virtue of which, quotas with respect to production and supply of cement were fixed in order to maintain the desired and targeted price level amongst the APCMA Members. The Agreement reveals that each Member's production capacity has been capped and this capacity is much less than the actual capacity that the individual Member is in fact capable of producing.

55. On examining the actual dispatches of cement companies in the year 2003, it was observed that the actual dispatches closely match the allocated quotas. By using the same capacity based allocation of quotas method, the year-wise cement dispatches of each Member from year 2003 to year 2008 were analyzed and it was observed that the percentage share of each

Member in the total cement dispatches very closely matches with its percentage share in the total production capacity of all the Members. CCP was able to determine that the Agreement was in existence, and was being implemented effectively by the cartel members. For cartel formation, the CCP imposed a penalty of PKR 6.3 billion on 20 units of the cement industry, at the rate of 7.5% of their respective turnover.[20]

2.5. Review of Cement Industry in Selected International Jurisdictions

India

56. The Indian cement industry is on a strong growth trajectory, supported by government-led infrastructure investments and robust capacity expansion plans. Cement production in India rose by 8.9% year-on-year to 426.29 million tonnes in FY24, while in FY25 (April–November) production stood at 282.57 million tonnes (MT), reflecting a 3.1% increase over the same period in FY24. Despite challenges such as reduced sales realization in CY24, industry sales are projected to grow by 8% in CY25, driven primarily by sustained demand from housing and infrastructure projects.

57. The market structure is characterized as an oligopoly, where large players exert partial pricing control and face low threat from substitutes. India also stands out globally as one of the greenest cement producers, with companies adopting environmentally sustainable practices.

58. Market concentration is increasing as the top four producers i.e. UltraTech, ACC-Ambuja, Shree Cement, and Dalmia Cement are set to add over 42 million tonnes of capacity in FY25, which will expand their collective market share from 48% in FY23 to an expected 54% by FY26. At a broader level, cement makers plan to invest nearly Rs. 1.25 lakh crore (US$ 14.63 billion) between FY25 and FY27 to add 130 million tonnes of grinding capacity, representing about 20% growth over current levels.

59. The industry continues to attract foreign participation, with FDI inflows in cement and gypsum manufacturing reaching Rs. 51,130 crore (US$ 5.98 billion) between April 2000 and March 2025. Government policy support also remains strong as under the Union Budget 2025-26, an allocation of Rs. 2,87,333 crore (US$ 33.08 billion) has been approved for the Ministry of Road Transport and Highways, marking a 3% increase over the previous year's budget, which will further boost cement demand.[21]

Vietnam

60. The cement market in the country recorded strong growth during 2020-2024, achieving a CAGR of 8.3%. Growth momentum is expected to remain positive, with the market projected to expand at a CAGR of 6.3% during 2025-2029. By the end of 2029, the cement

[20] CCP's Order Passed on 27-08-2009 available online at: https://appadminccp.cc.gov.pk/ccporders/efeffd5b-8f95-4ede-a67e-cef48b7049a4_Cement%20(final%20order)%2027-08-2009.pdf
[21] https://www.ibef.org/industry/cement-presentation

market is projected to expand from its 2024 value of US$3.86 billion to approximately US$5.25 billion. Vietnam's cement industry is navigating a turbulent period characterized by sluggish domestic demand, export market dependence, and growing energy and environmental pressures. While the country remains one of the world's leading cement exporters, softening construction activity and regional overcapacity are constraining price realization and profitability. Amid these challenges, leading players are accelerating sustainability investments, diversifying export routes, and deploying energy efficiency technologies.

61. Government policy is increasingly geared toward emissions reduction and industrial modernization. The medium-term industry outlook hinges on balancing environmental mandates with export competitiveness and domestic market revival. Vietnam's cement industry, once driven by domestic construction booms, is now realigning around export resilience, regulatory compliance, and sustainable innovation.[22]

Türkiye

62. The Turkish cement market is poised for robust expansion, with the market size in 2022 estimated at approximately 85.11 million metric tonnes (MMT) and projected to grow at a CAGR of 6.43% between 2023 and 2028. Turkey ranked as the fifth-largest cement producer globally in 2022, following China, India, Vietnam, and the United States. The residential segment currently dominates demand, while Portland cement is the fastest-growing type due to its extensive use across housing, commercial, and industrial construction sectors.[23]

63. Significant growth drivers include the government's expansive social housing projects, particularly the TOKİ urban renewal initiative, which has delivered over 1 million apartments across 81 provinces, fueling demand in the residential segment. Additionally, there is a rising emphasis on the use of green cement, a more environmentally friendly alternative that mitigates CO_2 emissions while offering greater durability and offering new growth avenues as sustainability becomes a focal point.

64. Turkey's expanding economy, stable political climate, and solid legal system have made it a popular destination for investors from abroad. The public authority has carried out changes to empower FDI and establish an effective business climate, including smoothed out guidelines, speculation motivations, and tax reductions.

Bangladesh

65. Bangladesh's cement industry has experienced steady growth and is largely self-sufficient in meeting local demand. Although it ranks around 40th globally behind major producers.

[22] https://www.researchandmarkets.com/reports/5759993/vietnam-cement-industry-market-size-and-forecast?utm_source=GNE&utm_medium=PressRelease&utm_code=whxff3&utm_campaign=2075719+-+Vietnam+Cement+Industry+Report+2025+%7c+Output+to+Grow+by+6.6%25+to+Reach+%244.12+Billion+this+Year+-+Size+%26+Forecast+by+Value+and+Volume+Across+80%2b+Market+Segments+to+2029&utm_exec=chdomspi
[23] https://www.techsciresearch.com/report/turkey-cement-market/7982.html

The industry comprises over 55 companies, with approximately 34 in active commercial production, currently capable of producing around 20 million tonnes annually. The sector has expanded rapidly in recent decades, with consumption primarily driven by housing and infrastructure projects. The housing sector alone accounts for roughly 60–65% of cement usage.[24] Demand is propelled by large-scale public infrastructure and urbanization. Cumulative projects such as the Padma Bridge, Dhaka Elevated Expressway, metro rail systems, and industrial zones have fueled massive cement requirements and favored local manufacturers, who supply the majority of domestic demand.

66. The government has also taken targeted measures to enhance sustainability and technological advancement in the cement sector. Policies promoting blended cement using supplementary cementitious materials (like slag and fly ash) have been integrated into public procurement standards to reduce clinker usage. Energy efficiency strategies such as adoption of Vertical Roller Mills (VRMs), co-processing of alternative fuels (e.g., refuse-derived fuel), digital process controls, and energy optimization systems are increasingly prevalent among leading producers. Additionally, the government's push toward "green bricks" cement-based blocks mandated for public construction and incentivized via reduced value added tax (VAT), simplified environmental approvals, and low-interest financing reflects its commitment to more sustainable building materials. The roadmap aims for 100% block utilization in public works by the fiscal year 2028–29.[25]

Iran

67. The Iranian cement industry is facing significant challenges both domestically and abroad. Private demand has weakened sharply as residential construction slowed due to double-digit inflation and tighter monetary policies. To cope with extreme summer temperatures and electricity shortages, the government imposed a mandatory 15-day shutdown of cement and steel production further constraining output. While production in Q1 2025 rose slightly by 1.1% for cement and 2.2% for clinker, domestic demand declined by 3.1%, highlighting fragility in the home market.

68. On the export front, Iran's cement shipments grew by 17.1% in Q1 2025, but clinker exports dropped steeply by 36.3%. This has raised concerns over the country's competitive position, particularly as rivals such as Egypt and China are stepping up their own clinker exports. Despite these pressures, Iran retains substantial production capacity of around 109.55 Mta of cement, 99.85 Mta of clinker, and 2.99 Mta of white cement across 94 plants, two-thirds of which remain government-owned.[26]

[24] https://www.cementequipment.org/home/cement-industry-in-bangladesh/
[25] https://www.dhakatribune.com/bangladesh/328956/what-bangladesh-is-doing-to-shift-to-%E2%80%98green
[26] https://www.cemnet.com/News/story/179182/iranian-cement-stumbling-on-domestic-difficulties-and-competition-abroad.html

69. To strengthen regional presence, Iranian companies such as Fars and Khuzestan Cement Holding are also investing abroad, including a 0.8 Mta grinding plant in Iraq, which helps the industry maintain an export foothold despite growing international competition.

2.6. Differences of Pakistan's Cement Sector with other jurisdictions

70. The above review of the selected jurisdictions shows that Pakistan's cement sector lags behind its peers on multiple fronts. For instance, India with production of 426 MT in FY24 and planned additions of 130 MT capacity by FY27, is not only scaling rapidly but also attracting over US$ 6 billion in FDI while positioning itself as one of the world's greenest cement producers. Vietnam, despite domestic demand pressures, sustains an 8.3% CAGR (2020–24) by diversifying exports, investing in energy efficiency, and aligning with emissions reduction mandates contrasting with Pakistan's dependence on few export destinations and limited green policy integration.

71. Türkiye, the 5th largest global producer (85 MMT, 2022), leverages mega housing programs such as the TOKİ initiative (one million apartments) and a growing green cement market to anchor demand, while Pakistan lacks comparable housing-driven growth. Bangladesh, though producing only 20 MMT annually, has institutionalized blended cement in procurement, mandated 100% block utilization in public works by FY29, and rapidly adopted VRMs[27], alternative fuels, and digital controls demonstrating greater technological modernization than Pakistan. Further, Iran with 109.5 Mta cement capacity, sustains competitiveness through regional investments like grinding plants in Iraq, while Pakistan has not expanded beyond domestic boundaries.

Table 5: Comparison of Pakistan's Cement sector with other selected jurisdictions

	India	Vietnam	Türkiye	Bangladesh	Iran	Pakistan
Production / Capacity	426.29 MT (FY24); +130 MT planned by FY27	Market value US$3.86 bn (2024); strong export base	85.11 MMT (2022)	~20 MMT annual capacity	109.55 Mta cement; 99.85 Mta clinker	84.58 MT capacity (2024); +85% over decade
Growth Trajectory	Production +8.9% YoY (FY24); sales +8% projected (CY25)	CAGR 8.3% (2020–24); 6.3% projected (2025–29)	CAGR 6.43% (2023–28)	Steady growth	Cement +1.1% (Q1 2025); demand –3.1%	Domestic growth constrained; exports rising
Market Structure / Demand Drivers	Oligopolistic; infrastructure and housing-led demand	Export-oriented; weak domestic demand	Residential demand dominant; TOKİ housing program	Housing (60–65%) and mega infrastructure projects	Domestic construction slowdown	Domestic demand weakened by PSDP cuts, high interest rates

[27] Vertical Roller Mills (VRMS): They are modern, energy-efficient grinding technology, increasingly adopted worldwide e.g., Bangladesh, India and Vietnam.

Investment & FDI	FDI US$ 5.98 bn (2000–2025); Rs. 1.25 lakh crore planned investment	Sustainability-driven modernization	Strong FDI-friendly framework	Public infrastructure investment driven	State dominance; overseas plant investments	Limited foreign investment
Export Strategy	Primarily domestic-led growth	Diversified export markets	Domestic-focused	Largely self-sufficient	Regional investments (e.g. Iraq grinding plant)	Reliant on few export destinations
Technology & Efficiency	Advanced, green production practices	Energy efficiency technologies adopted	Increasing green cement adoption	VRMs, alternative fuels, digital controls	Capacity surplus; energy constraints	Selective WHR, roller mills; energy ~60% of cost
Sustainability / Green Policy	Among world's greenest producers	Emissions reduction mandates	Green cement gaining traction	Blended cement & green blocks mandated	Limited environmental progress	Limited green adoption
Clinker Ratio / Carbon Profile	Lower and improving	Improving through efficiency	Not specified	Reduced through blended cement	High clinker capacity	Clinker ratio 0.95 vs global avg 0.72
Key Challenges	Rising concentration	Overcapacity, export dependence	Housing sustainability balance	Input cost volatility	Energy shortages, sanctions	High coal dependency; narrow exports
Strategic Lesson for Pakistan	Scale with green leadership & FDI	Diversify exports & embed efficiency	Link housing policy with cement demand	Use mandates to drive tech & sustainability	Expand regionally to secure markets	Reduce clinker intensity, modernize tech, diversify exports
Source: Various countries websites						

2.7. Lessons for Pakistan

72. Over the last decade, Pakistan's cement industry has undergone a major capacity expansion, reaching 84.58 million tonnes in 2024 showing an increase of 85%. Historically, firms in the sector have strategically expanded capacity to safeguard and consolidate their market positions. In recent years, the growth in exports has highlighted Pakistan's competitive edge in regional and global markets, reflecting a deliberate strategic shift toward international markets amid subdued domestic demand.

73. Despite this progress, several factor continue to impact domestic consumption i.e. higher financial costs, lower household incomes, and a reduction in allocations in the PSDP funds have constrained construction activity. At the same time, tight monetary conditions, political uncertainty, and reduced access to housing finance have further weakened domestic demand. Higher international coal prices have also pressured production costs, dampening output growth.

74. On the efficiency and environmental front, the industry has adopted selective interventions. Several plants have installed waste heat recovery (WHR) systems, shifted from ball mills

to roller mills to enhance efficiency, and in some cases replaced steel grinding media with alumina. Energy, however, remains the dominant cost component contributing nearly 60% of total production costs with coal as the primary energy source. Cement production in Pakistan accounts for 65–70% of total industrial coal consumption and nearly 49 percent of national coal-related emissions, underscoring the sector's heavy carbon footprint. The clinker-to-cement ratio in Pakistan stands at 0.95, well above the global average of 0.72 and significantly higher than China's 0.57–0.60, which is currently the global benchmark. The International Energy Agency (IEA) projects that the global average ratio must be reduced to 0.65 by 2030 to align with net-zero targets.[28]

75. The experiences of peer economies provide valuable lessons for Pakistan. For instance India's capacity expansion strategy is accompanied by green production leadership and large FDI inflows. Vietnam has diversified its export markets while embedding energy efficiency technologies while Türkiye has combined mass housing programs with green cement adoption. Bangladesh has advanced technological modernization (VRMs, blended cement, green blocks) through targeted policies, and Iran sustains competitiveness via regional investments in overseas plants. On the other hand, Pakistan's industry remains constrained by high coal dependency, a near-static clinker ratio, limited green adoption, and narrow export diversification.

76. Going forward, the industry should prioritize sustainability through blended cement adoption, supported by public procurement mandates and fiscal incentives. Reduce clinker intensity to align with global best practices, modernize production technology to lower energy intensity, and diversify export markets to reduce reliance on a few regional countries. At the policy level, stable investment frameworks and targeted housing/infrastructure programs can create demand certainty, while encouraging foreign investment and green finance will be critical in driving the industry toward international competitiveness and long-term resilience.

[28] https://openknowledge.worldbank.org/server/api/core/bitstreams/1afd2713-6b41-40d2-8102-e4f533559b86/content

3 Market Structure of the Cement Industry

CHAPTER 3: MARKET STRUCTURE OF THE CEMENT INDUSTRY

3.1 Definition of the 'Relevant Market'

77. For competition analysis, the relevant market is defined in terms of: a) the "relevant product market"; and b) the "relevant geographic market". A relevant product market comprises all those products and/or services that are regarded as interchangeable or substitutable by the consumer, by reason of the products' characteristics, prices and their intended use. From this perspective, the following are some of the types of cement being produced in Pakistan:

i. Ordinary Portland Cement (OPC)

ii. Sulphur Resistant Portland Cement (SRPC)

iii. Low Alkali Cement (a variety of Portland cement)

iv. Portland Blast Furnace Slag Cement (PBFSC)

v. White cement

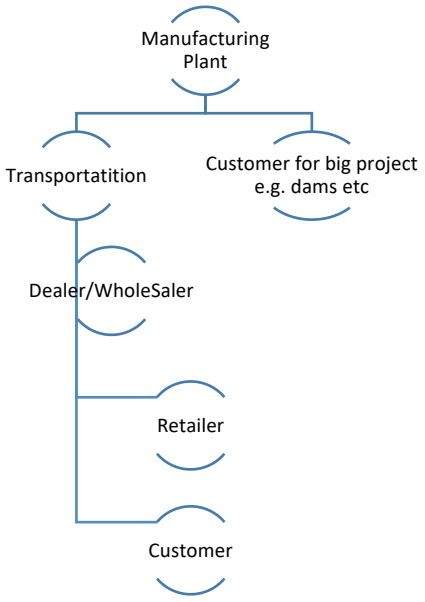
78. 'OPC' is the most commonly produced variety among them, accounting for almost 95% of the overall market share. As OPC is the primary product being produced by cement companies, hence the relevant product market is taken as 'Ordinary Portland Cement'.

79. A 'relevant geographic' market comprises the area in which the firms concerned are involved in the supply of products or services, and in which the conditions of competition are sufficiently homogeneous. As the cement industry in Pakistan is divided into two segments: namely Southern and Northern regions respectively. Hence, the Report examines the competition dynamics in both of these regions.

3.2 Cement Industry - Supply Chain

80. As far as the distribution of cement is concerned, major part of Pakistan is covered by the supply chain of dealership. A dealer gets registered with the company and supplies to the retailers in his allocated area. The customer can book his order to the retailer. The customer generally do not directly book order from manufacturer without getting registered with the manufacturer as a dealer or a wholesaler. The direct supply to customers is done for mega projects only, after following specific rules.

Figure 3: Supply Chain of Cement



3.3 Cement Demand Side

81. On the demand side, the main characteristics of the cement are:

    i. Price elasticity of demand is low- Ordinary Portland Cement has no close substitutes.

    ii. The demand for cement is 'derived' demand, i.e. linked to the demand for its uses, such as housing and infrastructure. It is estimated that the demand for housing is more than sixty percent and the rest accounts for infrastructure. Cement demand is correlated with infrastructure and construction activities, as most of the public sector projects are spurred by PSDP funds. During FY24, PSDP budget allocation was around PKR 940 billion of which around PKR 659 billion was disbursed. The budget allocation for PSDP for FY 25 was around PKR 1100 billion of which PKR 596 had been utilized.

    iii. Cement demand is geographically dispersed and corresponds to population density. The demand could grow, as population density may decrease from the urban centers after the COVID-19, hence more construction is expected in the periphery.

3.4 Cement Supply Side

82. On the supply side, the main characteristics of cement are:

    i. Cement is an intermediate (producer) good,

    ii. Large capital is required for the production of cement (large fixed/ sunk costs, mainly plant costs),

    iii. Economies of scale is achievable in its production

    iv. Cement can't be stored for long term, as it is costly and not economically feasible as well as technical specifications of the product gives it a limited shelf life

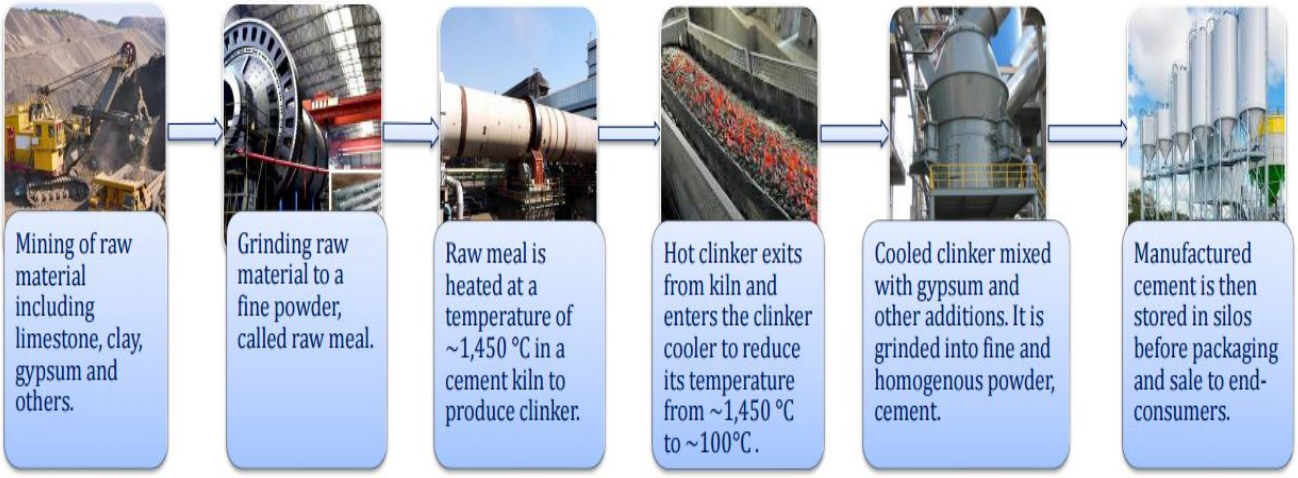
    v. Value-to-weight ratio of cement is low, which leads to costly transportation.

83. The Cost structure and competitiveness of the companies, to a large extent depends on the companies' having access to a cheaper power source, a quality limestone reserve, or being close to the bigger markets.

3.5 Cement Manufacturing Process

84. The manufacturing process of cement from the treatment of raw materials to the packaging of final product is composed of various stages. The following flow chart explains cement production:

Figure 4: Cement Production Process



Source: Pacra

85. The primary raw material for cement manufacturing is calcium carbonate or limestone. This is obtained from the quarry where, after the removal of overburden, the rock is blasted and loaded into trucks and then transported to crusher. There are two types of processes of cement manufacturing i.e. dry and wet. Using any of the processing, clinker is produced, which is then grinded with a small quantity of gypsum to a fine powder called cement. The finished cement is stored in silos where further blending ensures consistency. Cement is dispatched either bulk or in 50 kg bags, and distributed from factory in rail trucks or road vehicles.

3.6 Types of Cement

86. The following types of cement are being produced in Pakistan.

i. **Ordinary Portland Cement (OPC):** Ordinary Portland cement (simply called cement or grey cement) refers to the hydraulic binding material ground by mixing Portland cement clinker, 6% ~ 15% blended materials, and appropriate amount of gypsum. This type of cement is an ideal building material for almost all structural work including all kinds of concrete construction.

ii. **Sulphate Resistant Cement (SRC):** Sulphate Resistant Cement is a type of Portland cement having low Tricalcium Aluminate (C3A) content. Sulfate Resisting Cement is designed to improve the performance of concrete where the risk of sulfate attack may be present. It also provides improved durability for concrete in most aggressive environments, reducing the risk of deterioration of the structure and structural failure.[29]

[29] https://www.cementl.com/sulphate-resisting-cement/

iii. **Low Alkali Cement:** Low alkali cement is a type of Portland cement with a total content of alkalis not above 0.6%. It is used in concrete made with certain types of aggregates that contain a form of silica that reacts with alkali to cause an expansion that can disrupt the concrete structure, e.g. dams, sea walls and reservoirs, bridges and other sub merged structures.[30]

iv. **Portland Blast Furnace Slag Cement:** Blast furnace slag cement is the mixture of ordinary Portland cement and fine granulated blast furnace slag obtained as a byproduct in the manufacture of steel with percent under 70% to that of cement. It is used in ready mix concrete plants, for water retaining such as retaining wall, rivers, and ports, tunnels for improvement in impermeability, mass concreting works such as dams and foundations which require low heat of hydration.[31]

v. **White Cement:** White cement differs from grey Portland cement in its color and fineness. The color of this cement is determined by its raw materials and the process of manufacture. It is used for prestige construction projects and decorative works. It is used in roads due the property of high reflectiveness to add visibility to highway medians. White cement is also used in a high amount for manufacturing precast members.[32]

3.7 Market Players

87. The cement industry in Pakistan is divided into two zones, namely the Northern and Southern regions. The Northern region covers the provinces of Punjab, Khyber Pakhtunkhwa, Azad Kashmir, and Gilgit-Baltistan, while the Southern region covers the provinces of Sindh and Baluchistan. There are 16 companies with 27 manufacturing plants operating in this sector, having a combined manufacturing capacity of 83.12 MT. Out of these 16 companies, 14 are members of the All Pakistan Cement Manufacturers Association (APCMA), while two are non-members, namely Dandot Cement and Flying Cement.

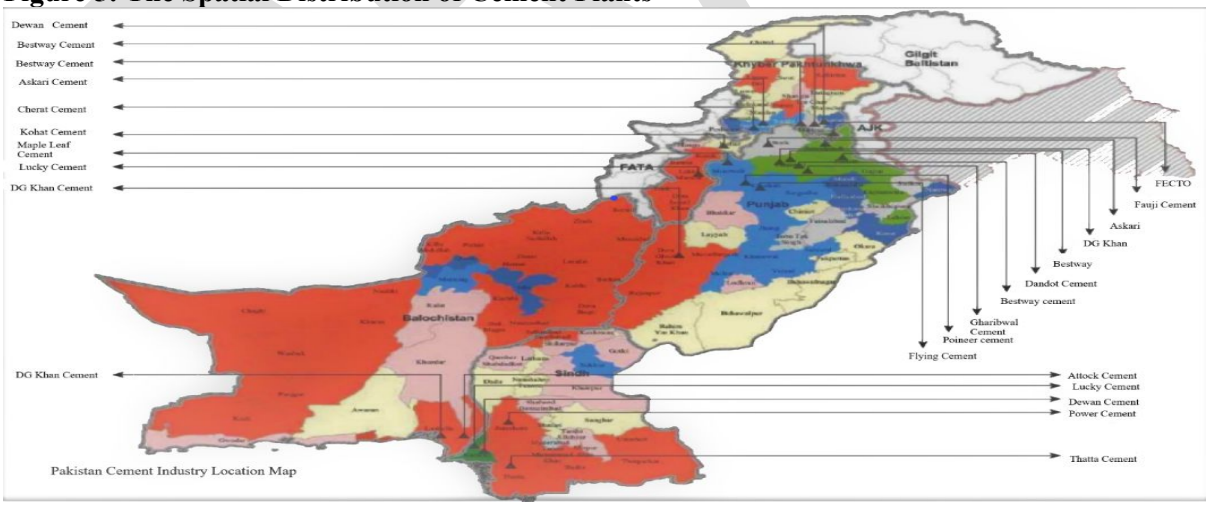
88. The table below presents the companies installed production capacity for FY 2024–25, their regional presence, total dispatches during the same financial year, and their market shares. Lucky Cement has the highest share (20%), followed by Bestway Cement (14%), Fauji Cement and DG Khan Cement (11%), respectively. Together, these four major players control 56% of the market. Lucky Cement and DG Khan Cement operate in both the North and South zones.

[30] https://www.britannica.com/technology/cement-building-material/The-major-cements-composition-and-properties#ref609192
[31] https://theconstructor.org/concrete/portland
[32] https://theconstructor.org/concrete/white-cement/23732/

Table 6: Market Players along with Installed Capacity and Market Shares (2024-25)

Sr.No.	Company	Plants	Region (North/South)	Installed Production Capacity (MT)	Capacity Utilization (%)	Total Dispatches (MT)	Market Share (%)
1	Bestway	5	North	14,593,751	42	6,844,853	14
2	Kohat	2	North	5,022,600	43	2,328,338	5
3	Fauji	3	North	9,960,000	47	5,368,785	11
4	DG Khan	3	North/South	6,720,000	75	5,286,785	11
5	Lucky	2	North/South	14,535,000	54	9,290,000	20
6	Pioneer	1	North	4,947,143	36	2,072,233	4
7	Maple Leaf	1	North	7,800,000	47	4,014,856	8
8	Cherat	1	North	4,320,000	49	2,390,164	5
9	Fecto	1	North	900,000	68	713,644	1
10	Dewan	2	North/South	2,940,000	42	1,438,000	3
11	Flying Cement[33]	1	North	686,000	91	621,490	1
12	Dandot Cement[34]	1	North	480,000	79	378,349	1
13	Gharibwal Cement	1	North	2,250,000	50	1,221,411	3
14	Attock	1	South	4,097,285	68	2,763,438	6
15	Thatta	1	South	660,000	63	508,513	1
16	Power	1	South	3,210,000	67	2,384,950	5
	Total	**27**		**83,121,779**	**58**	**47,625,809**	
Source: APCMA, Companies Financial Statements.							

Figure 5: The Spatial Distribution of Cement Plants



Source: DG Khan Cement

[33] For 14 APCMA member companies, dispatches data was available and used to calculate market shares. For Flying Cement and Dandot Cement, only utilized capacity figures were reported. In the cement industry, production and dispatches are typically aligned due to minimal inventory storage. Therefore, utilized capacity has been treated as a proxy for dispatches to maintain consistency across firms. Given the small market shares of these two firms, this adjustment does not materially affect the HHI or the overall concentration assessment.

[34] Ibid

3.8 Herfindahl-Hirschman Index (HHI) - Overall

89. Herfindahl-Hirschman Index (HHI) is a common measure of market concentration used to determine market competitiveness. Companies in concentrated markets are considered to possess greater market power based on their higher market shares. A market with an HHI of less than 1,500 is considered competitive, an HHI between 1,500 and 2,500 is considered moderately concentrated, and an HHI of 2,500 or greater indicates a highly concentrated market.

90. Based on the above production capacity and dispatches data, the market appears fairly competitive, with the HHI at the overall Pakistan level calculated at 1051. However, the markets become significantly more concentrated and less competitive at zonal and provincial levels. Majority of the companies operate in North region i.e. approximately 70% while South region comprise few companies but includes large dual region companies i.e. Lucky cement and DG khan Cement. The regional segmentation is important because demand patterns, logistics costs, and distribution channels differ substantially between North and South markets. As it is evident from the above table that most companies are operating below full capacity, creating room for aggressive competitive behavior or, alternatively, incentives for stabilization via tacit coordination. Keeping in view the movement of cement between provinces, the HHI must be interpreted with caution, as it does not fully capture the complexities of the market. For instance, despite a low HHI in a zone or province, there may still be anti-competitive practices such as cartelization or collusion, and vice versa. Hence, monitoring competition conditions remains crucial for both concentrated and non-concentrated markets.

$$HHI= (14)^2 + (5)^2 + (11)^2+ (11)^2+ (20)^2+ (4)^2+ (8)^2+ (5)^2+ (1)^2+ (3)^2 + (1)^2 + (1)^2+ (3)^2 + (6)^2+ (1)^2 + (5)^2$$

$$HHI= 1051$$

3.9 Regional Herfindahl-Hirschman Index (HHI)

91. The Herfindahl–Hirschman Index (HHI) has been calculated on a region-wise basis to assess the level of market concentration in Pakistan's cement sector.

3.9.1 Market of North Zone

92. In the North region, the HHI stands at 1,222, indicating a low to moderately concentrated market. Market shares are relatively dispersed among several large firms, with Bestway Cement holding the largest share (21%), followed by Fauji Cement (16%), Lucky Cement (13%), and Maple Leaf Cement (12%) respectively. The absence of a single dominant firm and the presence of multiple competitors with comparable market shares suggest a competitive market structure, where firms face effective competitive constraints from one another. The table below shows the number of market players in the north zone along with their respective market shares.

93. HHI= $(21)^2 + (7)^2 + (16)^2 + (7)^2 + (13)^2 + (6)^2 + (12)^2 + (7)^2 + (2)^2 + (2)^2 + (2)^2 + (1)^2 + (4)^2$

HHI= 1222

Table 7: Cement Market - North Zone

Company	Installed Capacity	Dispatches	Market Share
Bestway	14,593,751	6,844,853	21%
Kohat	5,022,600	2,328,338	7%
Fauji	9,960,000	5,368,785	16%
DG Khan	4,020,000	2,359,984	7%
Lucky	9,737,500	4,342,239	13%
Pioneer	4,947,143	2,072,233	6%
Maple Leaf	7,800,000	4,014,856	12%
Cherat	4,320,000	2,390,164	7%
Fecto	900,000	713,644	2%
Dewan	1,080,000	548,224	2%
Flying Cement	686,000	621,490	2%
Dandot Cement	480,000	378,349	1%
Gharibwal Cement	2,250,000	1,221,411	4%
Total	**65,796,994**	**33,204,570**	
Source: APCMA, Companies Financial Statements.			

3.9.2 Market of South Zone

94. In contrast, the South region shows an HHI of 2,357, which reflects a moderately concentrated market. The market structure is characterized by significant dominance of a few players, particularly Lucky Cement, which alone accounts for 35% of the regional market. Other major players include DG Khan Cement (21%), Attock Cement (19%), and Power Cement (17%). The higher HHI indicates limited competitive intensity. The table below shows the number of market players in the south zone along with their respective market shares.

95. HHI= $(19)^2 + (4)^2 + (17)^2 + (21)^2 + (35)^2 + (5)^2$

HHI= 2357

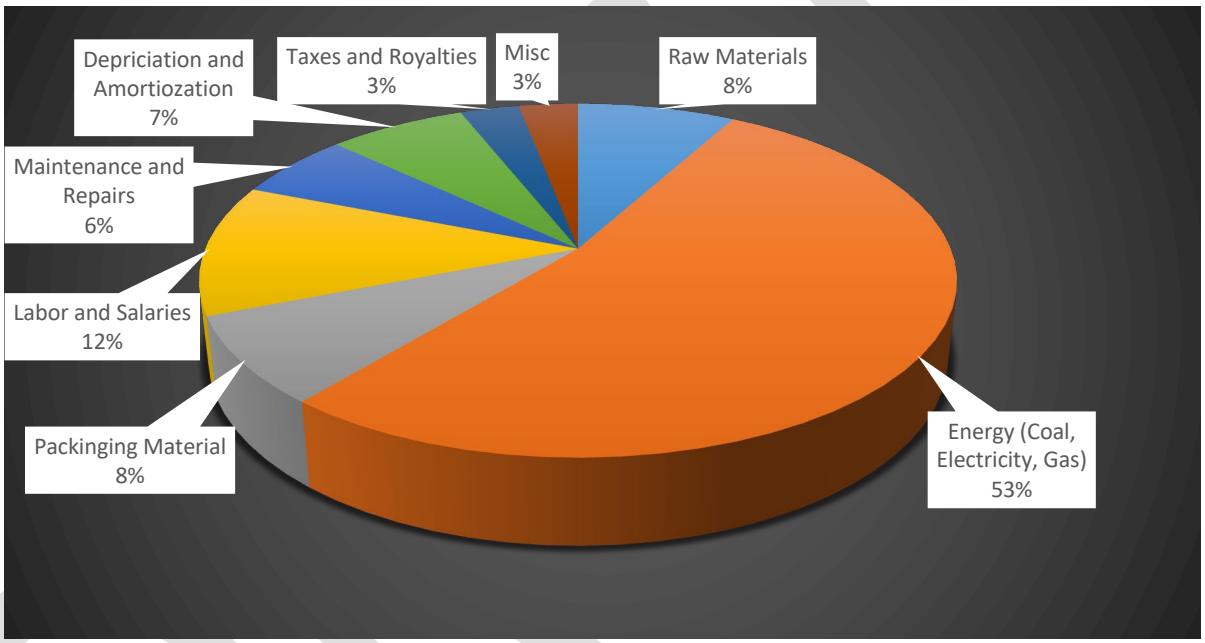
Table 8: Cement Market - South Zone

Company	Installed Capacity	Dispatches	Market Share
Attock	4,097,285	2,763,438	19%
Thatta	660,000	508,513	4%
Power	3,210,000	2,384,950	17%
DG Khan	2,700,000	2,926,801	21%
Lucky	4,797,500	4,947,761	35%
Dewan	1,860,000	674,938	5%
Total	**17,324,785**	**14,206,401**	
Source: APCMA, Companies Financial Statements.			

3.10 Cost of Production

96. The below pie-graph presents the average cost of manufacturing but does not include any admin, selling, finance and tax related cost. All such costs are considered at the time of selling the product. Fuel and power (coal, electricity, and gas) constitute the largest share at 53% of the total manufacturing cost, making it the dominant cost driver. Raw materials and packaging materials each contribute 8%, together accounting for 16% of the cost structure while Labor and salaries represent 12%. Depreciation and amortization accounts for 7%, while taxes and royalties, along with miscellaneous expenses, collectively contribute 6% respectively.

Figure 6: Cost of Production - Head wise share



3.11 Taxes and Duties

97. The table below presents the multi-layered structure of duties and taxes. It the combination of federal taxes, provincial levies, excise duties, royalties and other statutory charges.

Table 9: Applicable Taxes and Duties

Taxes and Duties	Rate
Income Tax	29%
Super Tax	10%
Sales Tax	18%
Federal Excise Duty (FED)	PKR 4000/ton
Workers Welfare Fund (WWF)	2% of Taxable Income
Workers Profit Participation Fund	5% of Profit before Tax
Employees Old Age Benefits	5% of Minimum Wage/Employee
Employees Social Security	6% of Minimum Wage
Track and Trace Stamping	PKR 2.5/bag
Custom Duty	0-20%

Infrastructure Development Cess		1.8% to 1.85% of the assessed value
Royalty -Minerals	**Sindh**	PKR 42-130/ton
	KPK	PKR 350/ton
	Punjab	6% of ex-factory price (under litigation)
	Baluchistan	PKR 120/ton
Excise Duty- Minerals	**Sindh**	PKR 5/ton
	KPK	PKR 3/ton
	Punjab	PKR 30/ton
	Baluchistan	PKR 30/ton
Marking Fee		0.1 % of bag value
Carbon Levy		PKR 2.5/liter of HSD
		PKR 82,077/ton of Furnace oil
Source: APCMA		

98. There are no major tax differences that affect the competitiveness of cement manufacturers across provinces. Both Federal Excise Duty (FED) and Sales Tax are applied uniformly under the federal fiscal framework, ensuring consistent treatment for all producers nationwide. However, the FED has increased from PKR 1,000 to PKR 4,000 per ton over the past five years, while the Sales Tax rate has increased from 17% to 18%.

99. On the other hand, royalty on minerals being the provincial subject varies considerably across provinces. As shown in the table above, not only do the rates differ, but Punjab has also adopted a different mechanism by charging royalty on limestone (a key raw material for cement manufacturing) at 6% of the ex-factory price of cement. Other provinces continue to apply fixed per-ton royalty rates. Notably, Khyber Pakhtunkhwa has increased its rate from PKR 250 to PKR 350 per ton effective July 2025, whereas rates in Sindh and Baluchistan remain comparatively lower at PKR 130 and PKR 120 per ton, respectively.

3.12 Impact of Taxes and Duties on Cement Prices

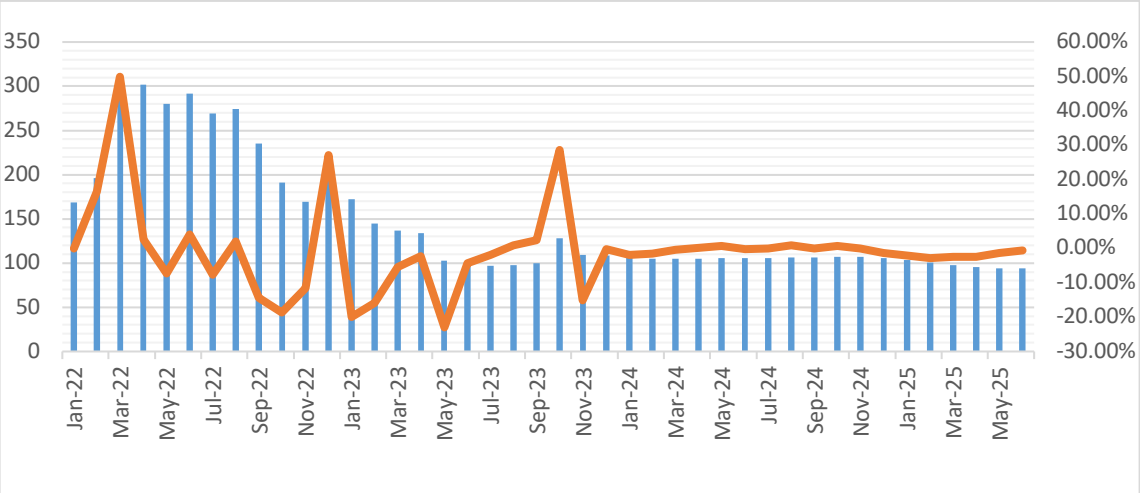
100. In reviewing the overall cost structure of the cement industry, it can be observed that fuel and power are the major cost components, reflecting the sector's heavy reliance on energy inputs. However, once the production costs are translated into the ex-factory price, the burden of taxes and duties becomes equally prominent. Industry estimates indicate that fiscal levies alone add approximately PKR 400–500 per 50 kg bag (forms approx. 50% of the cement price), making taxation a major determinant of the final cost of cement alongside core manufacturing expenses. This demonstrates that cement pricing is shaped not only by operational efficiency and input costs but also by the cumulative weight of the taxation framework.

3.13 Pricing Mechanism

101. The pricing mechanism is principally based on market dynamics of demand and supply, with the price being determined after due consideration of factors i.e. cost of production, distribution expenses, freight costs, applicable duties and taxes as discussed in the aforementioned paras. Markets forces have a key role in determining prices as public and private spending directly affects the demand for cement. The price of coal is subject to

fluctuations in the international market. Consequently, any variations in these components has a direct bearing on the overall pricing framework. The figure below shows the monthly trends in South African coal prices from January, 2022 to June, 2025. The coal prices during the year 2022 exhibited extreme fluctuations amid geopolitical tensions affecting the global supply and disrupting the overall international fuel markets. From early 2024 to current the coal prices appears to settle with low month to month variations.

Figure 7: International Coal prices trend



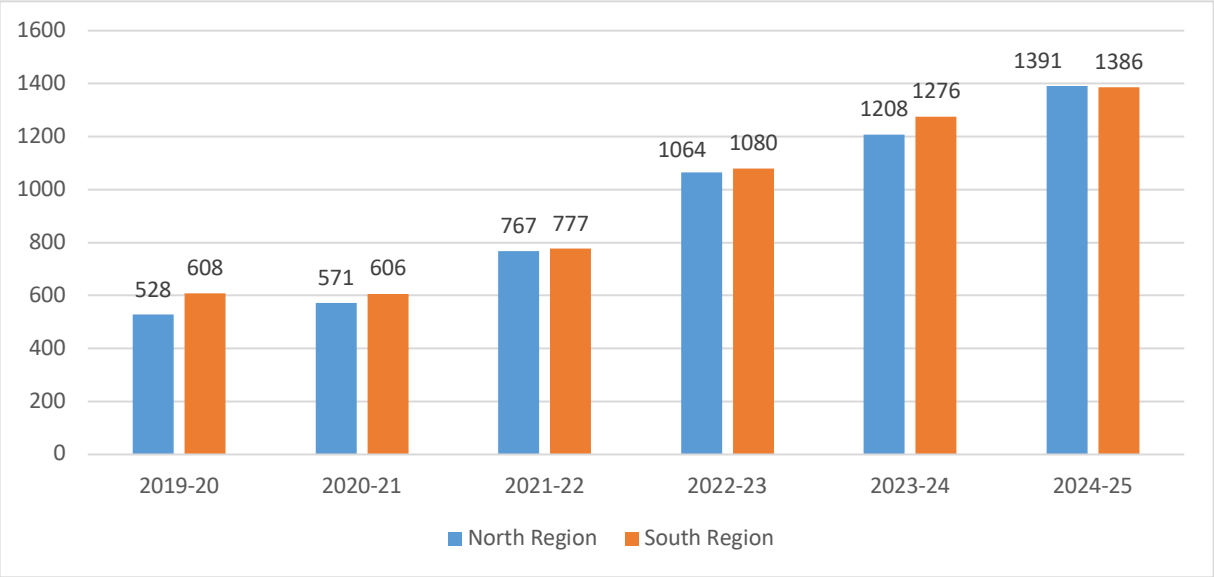
Source: Indexmundi.com

102. Beyond cost considerations, seasonality also plays a critical role in influencing cement demand and market performance in Pakistan. Sales generally peak during the hot, dry months of March to June, when construction activity accelerates due to favorable weather. Conversely, the rainy season (July to September) disrupts construction and transport, causing delays that negatively impact cement sales. During winter (October to February), demand varies by region, while severe cold can slow outdoor construction, indoor activity continues, partially supporting market volumes.

3.14 Regional Pricing Trends

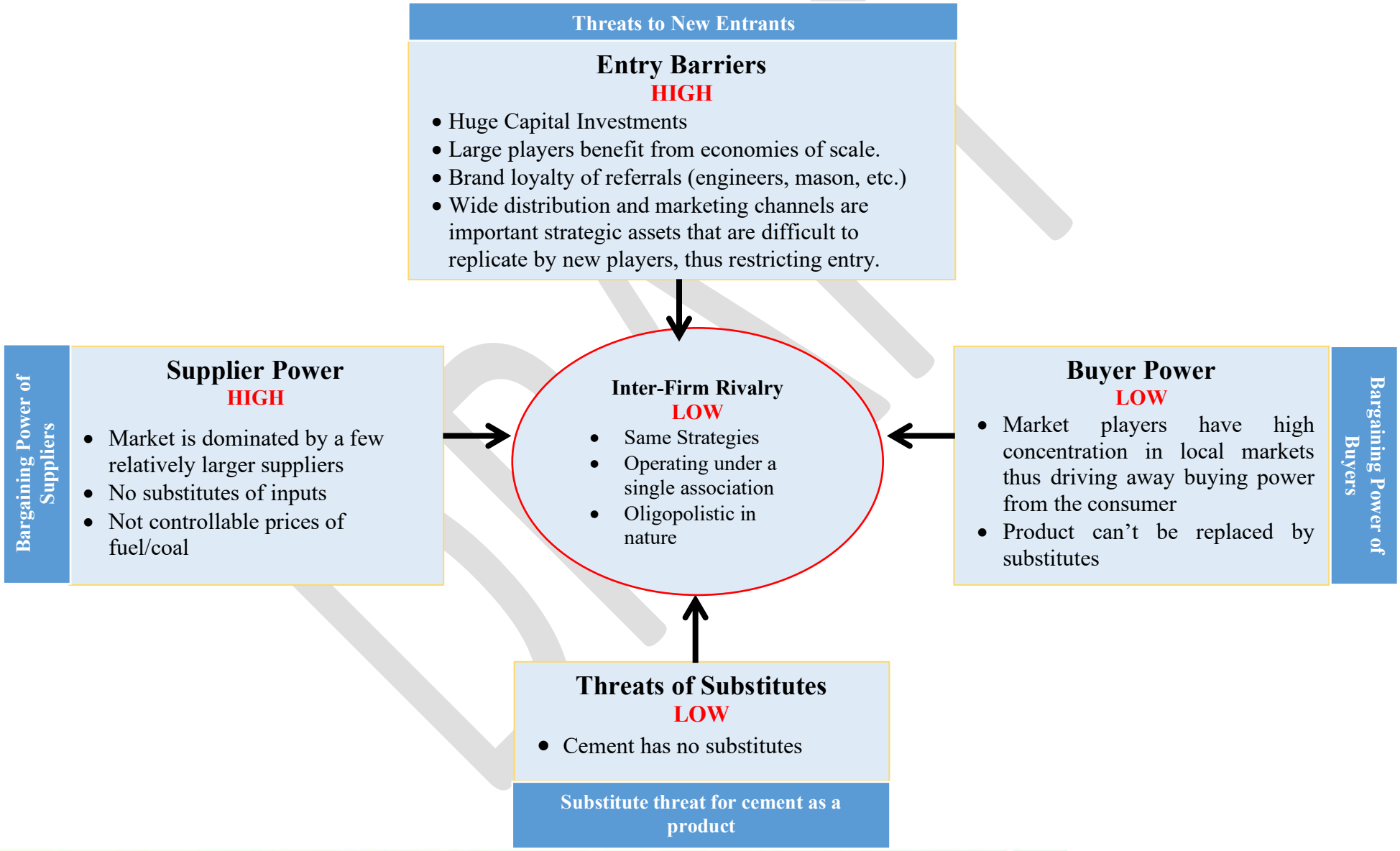
103. The figure below shows the average retail prices of cement for North and South regions starting from FY20 to FY25. It can be observed that there is a consistent upward trend in prices across both the regions from FY20 to FY25, primarily driven by cumulative increases in input costs, inflation, and taxation. Price growth remained moderate between FY20 and FY22 amid gradual inflation, rising energy and transport costs, and relatively stable demand. However, a sharp increase in prices is witnessed during FY23 and FY24, due to high inflationary pressures, fuel prices, electricity, and logistics costs, and strong domestic demand that enabled regional price adjustments. By FY25, prices reached their peak levels, influenced by increased taxes and duties, continued energy and freight cost inflation, and constrained demand linked to increase in production cost.

Figure 8: Region-Wise Average Retail Prices (FY20-25)



Source: PACRA report Cement Sector 2025

3.15 Porter's Five Forces Model



4 Regulatory Framework of the Sector

CHAPTER 4: REGULATORY FRAMEWORK OF THE SECTOR

104. The regulatory framework of any sector plays an important role in shaping the market structure and the behavior of the market participants. Generally, the policy and regulatory framework is defined as the existence of the necessary infrastructure that supports the control, direction or implementation of a course of action, rule, principle or law. In fact, the laws create the legal framework for both standards and regulations. The regulations provide relevant authorities the powers to affect the supply chain in a number of ways e.g. establishment of production plants, extraction of minerals, etc. Regulations also provide the authorities with the mechanism to devise and enforce the standards through inspection and corrective actions, for instance those relating to emission of pollutants in the environment.

105. Pakistan is blessed with the raw material to produce quality cement, this makes a long value chain, comprising:

- Pre-production process i.e. mineral extraction;
- Production of cement; and
- Post-production i.e. marketing and distribution of finished product to the final users.

106. Accordingly, this Chapter explores the regulatory framework and the relevant organizations, which may affect the above mentioned stages of the value chain to identify any impediments in business development and competition.

4.1. Regulations at the Pre-Production Stage

107. Establishment of a cement factory requires approval from Industrial Department of the relevant province. A formal application along with necessary documents has to be submitted to the provincial secretary to Industrial Development Board. The secretary, after confirming the completion of documents, forwards the application to the following authorities for grant of NOC:

i. Environment Protection Agency
ii. Local Government
iii. Mines and Minerals Departments of the relevant province

108. The roles of the above mentioned organizations, administrative set ups and the respective regulations are explored in the paragraphs to follow. The key laws governing the factory and safety registrations are as follows:

i. Balochistan Factories Act, 2021

ii. Factories Act, 1934

iii. Khyber Pakhtunkhwa Factories Act, 2013

iv. Punjab Factories Act, 2021

v. Sindh Factories Act, 2015

4.1.1 Environmental laws – to control pollution

109. Being a high environmental pollutant, the coal-fuel-energy intensive cement production process has been raising ecological concerns. Typically, 30-40% of direct CO2 emissions come from the combustion of fuels while the remaining 60-70% originate from the chemical reactions involved in the cement manufacturing.

110. Pakistan Environment Protection Agency works under the Ministry of Climate Change that provides a framework under the Environment Protection Act, 1997. Prior to devolution of powers to provinces in 2010, Pakistan Environment Protection Agency (PEPA) regulated environment related issues arising from establishment of cement factories. After the devolution, provincial environment protection agencies were empowered to regulate the issues in respective provinces. Accordingly, the Environment Protection Department of Government of Punjab and Sindh Environmental Protection Agency are the regulatory bodies in Punjab and Sindh, respectively.

111. If a new cement factory is intended to be established, the proponent submits an initial environment assessment or environmental impact assessment report to the environment protection agency of the relevant province and acquires approval. The agency reviews the initial environmental examination and accords its approval or asks the proponent to submit environmental impact assessment. The agency, then reviews it, accords approval subject to conditions or may ask the proponent to resubmit the assessment after required modifications. The following standards are considered for grant of approval:

a. **Municipal and Liquid Industrial Effluents:** Provincial Environment protection Agencies have defined environmental quality standards for Municipal and Liquid Industrial Effluents. These standards allow a specific level of effluents such as temperature increase, pH value, Biochemical Oxygen, Chemical Oxygen, Suspended solids, dissolved solids, Grease and Oil, Phenol, Chloride, Fluoride and other related effluents into inland waters and into Sewage treatment.

b. **Drinking Water:** These standards ensure quality of drinking water and water entering the distribution system. These standards ensure that the color, taste, odor and turbidity of water remain according to standards defined. Majority of the standards are in accordance with the standards defined by WHO.

c. **Ambient Air:** The ambient air standards set for industries by the provincial Authorities determine concentration of Sulfur Dioxide, Oxides of Nitrogen, Ozone, Suspended Particulate Matter, Respirable Particulate Matter, Lead and Carbon Monoxide into air.

d. **Noise:** To control noise pollution, the agencies have defined standards for noise production for industries during day and night times. These standards ensure limit of noise in residential, commercial, industrial and silence zone areas.

e. **Treatment of Liquid and Disposal of Bio-medical Waste:** Provincial governments follow the standards for Treatment of Liquid and Disposal of Bio-medical Waste by Incineration, Autoclaving, Microwaving and Deep Burial. These ensure the combustion efficiency, minimum temperature and gas residence time in main chamber along with limit of concentration of Nitrogen Oxides, HCL, Dioxins and Furans and Mercury (*Hg*) in particulate and other matters.

f. **Industrial Gaseous Emission:** These standards limit the production of industrial gases. Limits have been defined for smoke opacity, production of particulate matter from boilers and grinding, crushing, clinker coolers and related processes, Hydrogen Chloride, Chlorine, Hydrogen Fluoride, Hydrogen Sulfide, Carbon Monoxide and other related gases.

112. The application may be rejected if the agency finds the project contrary to environmental objectives. The review by the environment agency also includes a public participation that is held after thirty days of announcement in a newspaper. The final decision of approval/disapproval is communicated to the applicant within the period of four months. The key regulations governing the environmental approvals are as under:

i. Balochistan Environmental Protection Act, 2012
ii. Khyber Pakhtunkhwa Environmental Protection Act, 2014
iii. Pakistan Environmental Protection Act, 1997
iv. Punjab Environmental Protection (Amendment) Act, 2012
v. Punjab Wildlife (Protection, Preservation, Conservation and Management) Act, 1974
vi. Sindh Environmental Protection Act, 2014

4.1.2 Local Government - Approval of Land

113. Land acquisition for establishment of factory is subject to industrial regulations of the relevant province. Land Acquisition Act, 1894 provides the basis for approval of land for public procurement purposes. Local government department, upon receiving application, assesses whether the mentioned land falls in the positive or negative zone of industrial development. Negative zones are defined by the local governments according to environmental hazards and availability of minerals. The estate management body approves or otherwise the application according to its industrial zone policy. The key regulations governing the land acquisition are as follows:

i. Land Acquisition Act, 1894
ii. Transfer of Property Act, 1882 and Registration Act, 1908

iii. Local Government Rules and Regulations

4.1.3 Mines and Minerals Department – approval for exploration and extraction

114. The proponent of cement factory is required to submit a formal application for seeking approval of lease for a portion of land for setting manufacturing plant from mines and minerals department of the concerned province. The department then reviews the application. There are two scenarios for leasing of the Land:

1) Lease for exploratory reasons
2) Lease for extraction of minerals

115. The land is leased out for exploration, if the applicant has not yet explored the site. In this scenario, the land is leased for three years. Secondly, if the applicant has submitted the detailed report on composition of minerals of the proposed site then it is leased out for ten to thirty years, depending upon the exhaustion of minerals. The approval from mines and minerals department is subject to approvals from other aligned departments.

4.2. Regulations at the Production Process Stage

4.2.1 Mines and Minerals Department – setting the rate of royalty

116. Cement is a mixture of calcium silicates and calcium aluminates, where the requirement of calcium to produce cement is met by using high calcium limestone and clay. Limestone accounts for 80-90% of the raw material for the kiln feed (to produce clinker). This highlights the importance of availability of limestone reserves that may make a country net importer or net exporter of clinker and/or cement. Exploring the region for this key raw material, we note that Pakistan has massive limestone reserves required to produce cement over the next several years. Reserves are particularly abundant in Salt Range Hills, Margallah Hills and Koh-Suleman as well as in District Attock. The provincial Government authorities periodically make revisions to enhance the rates of royalty on limestone, shale clay and laterite, which impacts the value chain at the production stage. The key regulations governing the Mining Rights and Licensing are as under:

i. Baluchistan Mines & Mineral Act, 2025
ii. Baluchistan Mineral Rules, 2002
iii. Khyber Pakhtunkhwa Mines & Minerals Act, 2017
iv. Khyber Pakhtunkhwa Mines Safety, Inspection and Regulation Act, 2020
v. The Punjab Mines and Minerals Act, 2025
vi. Punjab Minerals (Control of Illegal Mining) Act, 2002
vii. Punjab Mining Concession Rules, 2002
viii. Sindh Mines & Minerals (Governance) Act, 2021
ix. Sindh Mines & Minerals (Governance) Rules, 2023

4.2.2 Oil and Gas Regulatory Authority – licensing and gas tariff setting

117. The categories of gas consumers have been defined by the Federal Government as Domestic (household), Power, Fertilizer, Industrial, Commercial, CNG, Captive power, Cement etc. Under Section 7 of the OGRA Ordinance 2002[35], the Authority has to determine and approve tariff for regulated activities, whose licenses provide for such determination or such approval or where authorized by the Ordinance.

118. The criteria for determination, approval, modification and evaluation of applications, and revision of tariffs have been prescribed in the Rules and in the terms and conditions of the respective licenses. The tariff's scope has been further highlighted in terms of Section 6(2)(t)[36] of OGRA Ordinance 2002, which provides that the Authority in consultation with the Federal Government and licensees for natural gas shall determine a rate for each licensee to carry out the regulated activity pertaining to natural gas. From the past two years the gas rates have been increased to Rs. 3500 per MMBTU for captive gas users and in addition to that captive levy of Rs. 571 per MMBTU is also applicable.

119. Additionally, the power tariffs prescribed by the National Electric Power Regulatory Authority (NEPRA) for industrial consumers under the B4 category determine the applicable electricity charges for the cement industry. The current tariff structure is as follows:

B4 Tariff	Charges (Rs.)
Fixed Rate	1,250/kw
Variable Rate - Peak Hours	36.68/kwh
Variable Rate - Off Peak Hours	27.96/kwh
Source: Industry sources	

4.2.3 Pakistan Standards and Quality Control Authority – certification for standard

120. Pakistan Standards of Quality Control Authority (PSQCA) working under the Ministry of Science & Technology formulates the standards under the PSQCA Act, 1996. Section 8 (ii) of the PSQCA Act 1996[37] empowers the authority to inspect and test products and services for their quality specification and characteristics during use and for import and export purposes.

121. The Pakistan standard for Portland cement is specified under PS:232-2015(R), which is applicable on all cement regardless of whether the same is sold locally or exported to other countries. Cement is specified as a compulsory item under the PSQCA Act, and is required to be affixed with PSQCA certification mark.

[35] https://www.ogra.org.pk/ordinance
[36] ibid
[37] https://www.psqca.com.pk/PSQCAACT/PSQCAActVI1996.pdf

4.3. Regulations affecting the Distribution System

122. Prior to 1985, the State Cement Corporation of Pakistan (SCCP) used to determine cement price for each plant, including wholesale and retail price. There was a system of average cost pricing coupled with cross-subsidization schemes for plant and regional markets.[38] Retail prices in each locality were arrived at by adding to the wholesale price an allowance for transport costs (to avoid disparities in cement prices in different areas). SCCP established the dealer margin for major consumption areas whereas elsewhere, government administrators such as Deputy Commissioners set the margins. In 1985, the government abandoned cement price controls and freight equalization.[39] After the privatization, SCCP lost its control over the sector, and All Pakistan Cement Manufacturer Association (APCMA) emerged as a representative body of majority cement manufacturers. Since then, the APCMA represents the cement industry to government, supplies information about industry and interacts to resolve industry's problems.

4.3.1 Prevention of profiteering/ hoarding and Dealership mechanism

123. Now, in a given area, the dealership mechanism plays an important role in the supply of cement. Each factory supplies its product to its sales office or to its authorized dealers. Major proportion (more than 90%) of the sales is made through dealers. This dealership mechanism covers even remote areas of the country. Each dealer supplies in its allocated area. Daily ex-factory price is determined by the factory, which is communicated to the dealers. The retail price is set by the dealer after adding margins of dealership and the retailer. Different prices prevail in the market depending upon the price paid by the retailer and his expenses.

124. There are price control and prevention of profiteering and hoarding laws at the Federal and provincial levels. In August 2020, the government of Punjab introduced amended Punjab Prevention of Hoarding Act 2020.[40] Accordingly, cement is included in the commodities, where strict law is applied to prevent hoarding.

4.3.2 National Highway Authority Regulations – weight limits for transportation

125. The NHA prescribed certain weight limits for using the motorways and national highways for transportation of cargo, which at the current rate are towards at lower side. The recent revisions of reduced load resulted, in the short run, in a shortage of transport, and an overall increase in the transportation cost. Consequently, an increase in the cement prices was observed. NHA sent a letter to cement manufacturers on 14th February 2020

[38] A "retention" price (SCCP wholesale price less taxes and duties) was established for cement as a whole, on the basis of average production cost, including an overall rate of return on fixed assets of about 15%. The price paid to each plant was the retention price plus development subsidy in the case of high-cost producers and vice versa, ensuring about 15% rate of return on equity.
[39] The SCCP changed pricing procedure. The dealers were made responsible for transport. Despite the same system of cross-subsidization at the plant level, SCCP plant managers were allowed to vary the ex-plant price. Plant managers were to be increasingly responsive to competitive pressure from the private sector.
[40] (Act XV of 2020). Available at: http://punjablaws.gov.pk/laws/2769.html

informing them about axle load regime as per schedule VI of NHSO 2000. According to the regime, the weight limit ranges between 17.5 tons to 61.5 ton for the vehicles of 2-6 axle.

126. This limit did not only increase the cost of transporting the cement manufactured but it also increases the transportation cost of coal and other raw materials that are used as input. On average Rs. 7000 per ton additional cost incurred on transportation of coal due to axle limit. This limit was only put on transporters using NHA and Motorways. But there was no limit on transporters using provincial roads. This situation created discrimination among companies and distorted competition. As there are many companies that do not use roads of NHA and Motorways. Therefore, they can transport their product with cheaper cost.

4.3.3 Protection to Consumers

127. Consumers' protection requires that the commodity of a specified standard is available in the market at a reasonable price. The Federal and provincial governments have a mechanism in place to check hoarding and profiteering of essential commodities including cement. The PSQCA Act protects consumers' interests by monitoring the quality of goods sold in the market. The Competition Commission of Pakistan looks into market distortions arising out of anti-competitive practices including abuse of dominance, cartelization and deceptive marketing. Also, there are specific consumer protection legislations in the provinces, which address consumers' grievances at the individual level as well and at Federal level there is a Federal consumer protection Act, 1995. The consumer protection and standard's legislations play a crucial role for healthy competition in the market.

5 Competition Assessment of the Cement Industry

CHAPTER 5: COMPETITION ASSESSMENT OF THE CEMENT INDUSTRY

5.1. Barriers to Competition

128. For a competition assessment of the Cement Industry in Pakistan, the barriers to competition are being thoroughly analyzed in this chapter, so as to identify factors that distort or restrict competition. These factors may affect any of the stages of value chain, such as the number of producers or suppliers of goods including import, and the distribution system till the retail level. The factors affecting market competition as barriers may be of structural, regulatory and strategic in nature, which restrict market development and expansion.

5.1.1 Structural or Natural Barriers

129. The 'Structural barriers' to market entry are those that relate to the structure or the very nature of the industry. These have more to do with the basic industry conditions than with strategic actions taken by incumbent players. This is why, these are also called the natural barriers to competition, such as the investment and financial requirements, nature and the use of commodity, technical and technological aspects of production or the product, etc. An overview of the overall industry's characteristics can help identify structural barriers in the cement industry.

5.1.2. Water shortage in mineral rich areas

130. The province of Balochistan has vast natural resources, including those which are used in the production of cement. The South Zone of the country can produce cheaper cement with the establishment of cement manufacturing plants at Quetta, Kalat, Mastung, Loralai and Lasbella. However, this could not be implemented due to the shortage of water say in Quetta, and lack of demand in the vicinity in other areas.

5.1.3 Low shelf life

131. Cement loses its strength with the passage of time, it is best used within 45 days of its production. This quality of the commodity reduces the number of players particularly in the distribution network, thus creating a natural entry barrier for potential businesses. For instance, the economic outlook and future prospects for infrastructure development play an important role in the capacity utilization and expansion decisions of the incumbent firms. Less businesses are attracted if housing and infrastructure investment climate is depressed.

5.1.4 High transport cost

132. Cement is a bulky commodity, it is usually carried in the form of powder for common customers. Owing to its nature, cement has a high transport freight weight that

adds to the total cost. It is a logistics intensive industry, both in sourcing of raw material and forwarding cement to the market. According to the industry sources, the inward and outward logistics contribute about a third to the total cost of cement. The industry tries to make a synergy in its inward and outward logistics by installing plants near the mineral rich area and serve the market with a radius of 150-250 km through more economical road transportation. Therefore, the bad condition of road network and inefficient logistics lead to lower capacity utilization of the plants, as transporting cement is cost-effective.

5.1.5 The Seasonal Fluctuation in Demand

133. The demand for cement faces seasonal fluctuations, plunging in winter and rainy season, and growing just after the end of winters. The period from March to September is considered as construction season. The seasonal variations in demand contributes to its price fluctuation as well. The price seasonality reduces the profits in the non-construction season, serving as a constraint to industry's expansion.

5.2. Regulatory Barriers

134. At times, the regulations by the government, sector specific policies, and Federal or provincial laws and rules may act as a barriers. The cement industry points towards several regulatory barriers, which are described here.

5.2.1 Impact of NHA Axle Load Limits on Cement Cost Structure

135. The incumbent firms have to comply with certain regulations, which may resultantly create barriers to entry and expansion. For instance, the axle load limit by the NHA is one such example, where Federal and provincial regulations were discriminatory until quite recently for this logistics intensive industry. Here are the details.

136. The NHA prescribed certain weight limits for using the motorways and national highways for transportation of cargo, which at the current rate are towards at lower side. The revisions of reduced load resulted in an overall increase in the transportation cost. Accordingly, an increase in the cement prices was observed. NHA sent a letter to cement manufacturers on 14th February 2020 informing them about axle load regime as per schedule VI of NHSO 2000. According to the regime, the weight limit ranges between 17.5 tons to 61.5 ton for the vehicles of 2-6 axle.

137. This limit did not only increase the cost of transporting the cement manufactured but it also increases the transportation cost of coal and other raw materials that are used as input. On average Rs. 7000 per ton additional cost incurred on transportation of coal due to axle limit. This limit was only put on transporters using NHA and Motorways. But there was no limit on transporters using provincial roads. This situation created discrimination among companies and distorted competition. As there are many companies that do not use roads of NHA and Motorways. Therefore, they can transport their product with cheaper cost.

138. It is also pertinent to note that there are discrepancies in the implementation of axle load limits across provinces. For instance, a single truck transporting imported coal from the port to cement plants located in Khyber Pakhtunkhwa (KP) typically carries approximately 58 to 60 tons of coal, whereas the same truck transporting coal from the port to plants situated in Punjab is carrying only 38 to 40 tons. This differential enforcement results in a cost advantage for cement manufacturers operating in KP, as the average freight cost per ton of imported coal is lower compared to that incurred by plants located in Punjab. Accordingly, such unequal treatment leads to a higher cost of production for cement plants in Punjab, thereby distorting competition within the industry.

5.2.2 Disparity in Royalty Rates among the Provinces

139. Cement is a mixture of calcium silicates and calcium aluminates, where the requirement of calcium to produce cement is met by using high calcium limestone and clay. Limestone accounts for 80-90% of the raw material for the kiln feed (to produce clinker). This highlights the importance of availability of limestone reserves that may make a country net importer or net exporter of clinker and/or cement. Exploring the region for this key raw material, Pakistan has massive limestone reserves required to produce cement over the next several years. Reserves are particularly abundant in Salt Range Hills, Margallah Hills and Koh-Suleman, Kohat Nizampur, Cherat as well as in District Attock.

140. The provincial Mines and Minerals Departments determine the rates of royalty for the minerals produced and carried away from the licensed or leased areas such as limestone, shale clay and laterite. The industry faces a competitive distortion arising from the contrasting mineral royalty structures applied across provinces. While Sindh, Khyber Pakhtunkhwa, and Baluchistan impose fixed per-ton royalty rates on limestone, Punjab has adopted a different mechanism by charging royalty at 6% of the ex-factory price of cement. This ad valorem approach directly links the royalty burden to market price movements, resulting in a disproportionately higher cost for Punjab-based manufacturers relative to their counterparts in other provinces.

141. The discrepancy has widened further following Khyber Pakhtunkhwa's recent increase in limestone royalty from PKR 250 to PKR 350 per ton effective July 2025, while rates in Sindh and Baluchistan remain comparatively low at PKR 130 and PKR 120 per ton. These inconsistencies in both rate levels and calculation methods create an uneven operating environment, affecting cost competitiveness, pricing strategies, and investment incentives across provinces.

142. Such provincial disparity in royalty regimes functions as a barrier, as companies operating in higher-royalty jurisdictions bear structurally elevated input costs without corresponding regulatory harmonization. This undermines competitive neutrality, influences plant location decisions, and may lead to market distortions in both cement production and inter-provincial trade.

5.2.3 Coal Handling Monopoly at PIBTL - A Structural Bottleneck Impacting Cement Industry

143. The import of coal has been restricted to a single terminal at Karachi, on account of environmental concerns. The consequent increased cost of import has adversely impacted the competitiveness of the industry, particularly to export cement to the other markets. This matter is explained in the paragraphs to follow.

144. The imported coal lands at Port Qasim, Karachi. The cement manufacturers (and other importers) earlier had options available to them to import coal at PQA or KPT. However, subsequent to the Supreme Court of Pakistan (SCP) order, coal handling at KPT ceased entirely. Now, Pakistan International Bulk Terminal Limited (PIBTL), under a 30 year concession with Port Qasim Authority (PQA) was granted contractual exclusivity, making it the only entity to handle all coal imports in Pakistan. Resultantly, PIBTL dictates pricing, service terms and operational conditions which forces the coal importers including cement manufacturers to accept the unilateral terms due to the absence of alternatives.

145. Currently, the PIBTL has a handling capacity of 20,000 ton per day. The coal from the vessel is dropped on the conveyor belt, which then transports it to the storage yard. Chronic delays, insufficient handling capacity, and frequent operational disruptions at PIBTL result in stranded vessels, production slowdowns, and heightened supply-chain volatility. These inefficiencies impose substantial demurrage costs on industries, draining foreign exchange and eroding production margins. Apart from the demurrages on delays in discharging, the cement manufacturers who use coal as an important fuel had to adjust their production schedule so as to avoid a complete shutdown. In case the stoppage at PIBTL had prolonged, cement industry would have come to a grinding halt due to non-availability or delayed supply of coal. Also, the likelihood of the recurrence of such events has increased manifold, as the PIBTL equipment is being worked overtime to cater to the needs of the importers.

146. The table below presents the comparison of rates charged by the KPT and PIBTL before the Supreme Court order where the importers had the option to import coal at KPT or PIBTL. At KPT the importers were paying a maximum of Rs. 330/ton as handling charges including wharfage charges of Rs. 81/ton. However, the situation changed after the order which gave the exclusivity to PIBTL to handle the coal at the port. The said handling charges have now increased at PIBT to approximately Rs.2,128/- per ton. Furthermore, the rates are being charged in dollar terms, which adds exchange-rate volatility and further increases the cost of doing business. The following Table presents a comparison of the rates charged by PIBTL:

Table 10: Comparison of Rates

Charges Breakup	Before Supreme Court Order- KPT	Before Supreme Court Order- PIBT	After Supreme Court Order- PIBT	After Supreme Court Order- PIBT	After Supreme Court Order- PIBT
Year	**2018**	**2018**	**2019-2021**	**2022-23**	**2023-25**
Vessel Handling	77	$3.11	$3.11	$3.11	$3.66
Royalty/Wharfage	81	$2.27	$2.27	$2.38	$2.39
Ancillary	172	$0.26	$1.01	$1.26	$1.56
Total Charges	**330**	**$5.64**	**$6.39**	**$6.75**	**$7.60**
Exchange Rate	1	134	164	248	280
Amount in PKR	**330**	**756**	**1,048**	**1,674**	**2,128**
Source: APCMA					

147. The industry sources have raised concerns that the SC's order favored a particular party, its conduct should, therefore, be looked into for possible of abuse of its power. The confirmation of veracity of this claim is outside the scope of this study but nevertheless it should be studied.

5.2.4 Impact of taxes and duties on Cement prices

148. The cement sector is subjected to a wide range of duties and taxes at multiple stages of production, sales, and imports, which significantly influence its cost structure and final consumer prices. At the production stage, coal being the primary fuel for cement manufacturing is largely imported and therefore faces customs duties, international price volatility, and exchange rate fluctuations. On the other hand, key raw materials such as limestone and gypsum are sourced domestically and are subject to provincial royalties, which vary considerably across provinces, as discussed in the preceding paras. Industry sources indicate that cement ranks as the second most heavily taxed sector after tobacco, reflecting a disproportionately high fiscal burden.

Table 11: Cost Comparison of Average Ex-factory prices of Cement

	2024-25		2023-24		2022-23	
Cost Head	**Cost (PKR)/50Kg**	**Share (%)**	**Cost (PKR)/50 Kg**	**Share (%)**	**Cost (PKR)/50 Kg**	**Share (%)**
Raw Materials (Limestone, Clay, Gypsum, etc.)	29	3	25	3	24	3
Energy (Coal, Electricity, Gas)	305	28	383	41	355	44
Packaging Materials (Bags)	43	4	43	5	40	5
Labor and Salaries	20	2	14	2	10	1
Maintenance and Repairs	32	3	22	2	12	2

Depreciation and Amortization	25	2	18	2	14	2
Loading	1	0	1	0	1	0
Excise duty and Royalties on Minerals	17	1	9	1	9	1
Miscellaneous (Admin, Security, etc.)	33	3	23	2	17	2
Finance Costs	8	1	13	1	12	1
Retailer tax	15	1	8	1	8	1
WPPF @ WWF	20	2	11	1	12	1
Income Tax	133	12	94	10	77	9
FED & Sales Tax	410	38	273	29	231	28
Total Cost per 50 Kg Bag	**1091**	**100%**	**937**	**100%**	**822**	**100%**
Source: Industry sources						

149. The Table 7 above presents a comparison of the average ex-factory price of a 50 kg cement bag over the past three fiscal years. The analysis shows that the total ex-factory price increased from PKR 822 in FY 2022-23 to PKR 937 in FY 2023-24, before rising further to PKR 1,091 in FY 2024-25, excluding retailer margins and transportation costs. While energy costs particularly coal, remain the single largest production input, the relative and absolute burden of taxes and duties has increased noticeably over time. In FY 2022-23, FED and sales tax together accounted for PKR 231 per bag (28% of total cost), rising to PKR 273 per bag (29%) in FY 2023-24, and further escalating to PKR 410 per bag (38%) in FY 2024-25. This sharp increase indicates that taxation has become the dominant contributor to the ex-factory price, surpassing even energy costs in FY 2024-25.

150. When viewed alongside prevailing inflationary conditions, the impact becomes more noticeable. During FY 2022-23, general inflation averaged 29.05%, followed by 23.88% in FY 2023-24, before easing to 4.62% in FY 2024-25. Despite the significant moderation in inflation in FY 2024-25, the ex-factory price of cement continued to rise sharply, driven primarily by higher tax incidence and underlying cost pressures. This divergence shows that fiscal measures contributed to increasingly driven cement price increases in the most recent year.

151. While the tax-heavy price structure disproportionately burdens end-users, particularly in a slowing construction and housing sector. As such, the current tax regime has emerged as a critical issue, directly undermining industrial competitiveness and amplifying costs for consumers, even in an environment of easing inflation.

5.2.5 Levies on Natural Gas and Furnace Oil for Captive Power Plants (CPPs) - Distortionary Impact on the Industry

152. Recent fiscal and regulatory interventions, through the imposition of petroleum, climate support, and off-the-grid levies on fuels used by Captive Power Plants (CPPs), have materially increased the variable cost of self-generation for the cement industry, resulting in significant market and regulatory distortions. The table below presents the quantified impact of these fuel levies on CPP power generation costs and the resulting incremental cost of cement production.

Table 12: Fuel Levies on CPP Power Generation Cost and Cement Production

Furnace Oil	**PKR/Ton**
Petroleum Levy	82,077
Climate Support levy	2,665
Total Levy	**84,742**
Furnace Oil Consumption-gm/kWh	210
Rate -PKR/KWh	**17.80**
Cost of Cement - PKR/ton	**1,602**
Gas	**PKR/Ton**
Off the Grid Levy	690
Gas Consumption-MMBTUs/kWh	0.00935
Rate-PKR/ton	**6.45**
Cost of Cement - PKR/ton	**581**
Source: Industry sources	

153. As per the notified rates, furnace oil supplied to CPPs is subject to a Petroleum Levy of PKR 82,077 per ton and a Climate Support Levy of PKR 2,665 per ton, resulting in a total levy burden of PKR 84,742 per ton. Based on an average specific fuel consumption of 210 grams per kWh, these levies alone translate into an incremental cost of PKR 17.80 per kWh of captive power generation.

154. When translated into cement production terms, this levy-induced increase results in an additional PKR 1,602 per ton of cement, excluding the base furnace oil price, sales tax, and other applicable statutory charges. This clearly indicates that the levy component rather than fuel market prices has become the dominant driver of CPP generation costs, effectively rendering furnace oil-based CPPs economically unviable.

155. Similarly, natural gas supplied to CPPs has been subjected to an Off-the-Grid Levy of PKR 690 per MMBtu. Based on an average gas consumption of 0.00935 MMBtu per kWh, this levy increases captive power generation cost by PKR 6.45 per kWh. On a cement production basis, this translates into an additional PKR 581 per ton of cement, arising solely from policy-imposed charges rather than underlying fuel costs. Cumulatively, levies on furnace oil and gas add approximately PKR 2,180 per ton of cement, which represents a substantial escalation in energy costs for a sector where fuel and power account for over 50 percent of the total cost of manufacturing.

156. These measures effectively penalize industrial efficiency and self-reliance, while long-standing inefficiencies in the national power system such as high transmission and distribution losses, electricity theft, and rising capacity payments remain unaddressed. Instead of correcting these structural weaknesses, the prevailing policy framework forces industry toward higher-cost and less reliable grid supply, thereby increasing operational risk, cost volatility, and competitiveness pressures for cement manufacturers.

5.2.6 Smuggling and Informal Cross-Border Trade

157. The domestic cement market continues to face significant distortion due to the persistent inflow of smuggled and under-declared cement and clinker from Iran, enabling evasion of customs duties, sales tax, and mandatory Pakistan Standards and Quality Control Authority (PSQCA) certification requirements. The smuggled cement and clinker is sold at prices below the legitimate cost structure of domestically manufactured cement, creating an uneven playing field for formal local manufacturers. The absence of PSQCA certification further raises concerns regarding product quality, consumer safety, and adherence to national standards.

158. Weak enforcement mechanisms and inadequate coordination among customs, border enforcement agencies, tax authorities, and market regulators, allowing illegal and under-reported imports that exacerbates market distortion, undermines fair competition, and results in significant revenue losses for the exchequer, while discouraging investment in the formal cement sector.

5.2.7 Brand Counterfeiting and Trademark Misuse

159. The cement industry is also confronted with the proliferation of counterfeit products that unlawfully imitate the packaging, logos, and trademarks of established and reputable brands. These counterfeit products are deliberately designed to mislead consumers into believing they are purchasing genuine, quality-assured cement. Such practices are particularly prevalent in rural and remote markets, where regulatory oversight, market surveillance, and enforcement capacity remain weak. The limited presence of inspection authorities and consumer awareness in these areas enables counterfeit operators to operate with minimal risk of detection.

160. The circulation of counterfeit cement poses serious risks to consumer protection and structural safety, as these products often fail to meet prescribed quality and strength standards. Their use in construction can compromise the integrity and durability of structures, increasing the risk of failures and safety hazards. In addition, counterfeiting results in a significant erosion of brand equity and consumer trust for legitimate manufacturers, who continue to invest in compliance, quality control, and brand reputation.

5.3 PESTEL Analysis

5.3.1 Political Factors

161. The cement industry is closely linked to government policies on infrastructure development, housing, and public sector investment. Variations in public spending and development priorities directly affect demand for cement and capacity utilization in the sector. In addition, differences in policy implementation across provinces create unequal operating conditions for firms located in different regions. Such inconsistencies affect production costs and weaken competitive neutrality within the domestic industry.

5.3.2 Economic Factors

162. The cement sector is highly sensitive to macroeconomic conditions, especially economic growth, construction activity, and public development spending. The industry is capital-intensive with high fixed costs, making it vulnerable to economic slowdowns and demand fluctuations. Energy and transportation costs form a significant portion of total production costs, while exchange rate volatility further increases cost uncertainty due to reliance on imported coal.

163. Taxation has become a major economic constraint for the sector. Federal and provincial taxes, duties, and levies now constitute a substantial share of the ex-factory price of cement, contributing to rising prices even during periods of easing inflation. This heavy tax burden suppresses demand, raises entry barriers, and adversely affects market contestability.

5.3.3 Social Factors

164. Long-term demand for cement is supported by population growth, urbanization, and housing needs. However, demand is subject to seasonal fluctuations, with lower consumption during winter and monsoon periods. These variations reduce capacity utilization and discourage new investment.

165. Market distortions also arise from social and enforcement-related issues. The presence of counterfeit cement and informal cross-border inflows of smuggled cement and clinker undermines consumer confidence, compromises quality and safety standards, and creates an uneven playing field for compliant manufacturers. Weak market surveillance and limited consumer awareness, particularly in remote areas, allow such practices.

5.3.4 Technological Factors

166. Technological efficiency plays an important role in determining competitiveness in the cement industry. Modern plants with energy-efficient technologies and waste heat recovery systems enjoy lower operating costs. However, the high capital requirements for establishing or upgrading plants create significant entry barriers.

167. Regulatory constraints and supply-chain disruptions, particularly in fuel supply and power generation, limit firms' ability to fully benefit from technological improvements.

Policies that increase the cost of captive power generation further reduce incentives for investment in efficient self-generation solutions.

5.3.5 Environmental Factors

168. Environmental considerations significantly influence the cement industry due to its reliance on natural resources and energy-intensive processes. Water scarcity in mineral-rich areas, particularly in parts of Baluchistan, restricts the establishment of new plants despite the availability of limestone reserves. This acts as a natural barrier to entry.

169. Environmental regulations related to emissions, quarrying, and fuel handling increase compliance costs. While necessary, inconsistent application and enforcement of these regulations across regions can result in unequal cost burdens and affect competitive balance within the industry.

5.3.6 Legal and Regulatory Factors

170. Legal and regulatory frameworks represent a major source of competitive distortion in the cement sector. Significant differences in provincial royalty regimes lead to uneven input costs across provinces, affecting pricing, investment decisions, and inter-provincial competition.

171. Regulatory interventions in logistics and inputs, such as axle load limits and the exclusive handling of imported coal at a single terminal, have increased costs and introduced structural bottlenecks. These measures restrict market access, raise operational risks, and limit effective competition. In addition, weak enforcement against smuggling, counterfeiting, and non-compliance with standards further undermines fair competition and discourages formal sector investment.

5.4 Conclusion

172. The PESTEL analysis indicates that competition in the cement industry of Pakistan is constrained by a combination of structural characteristics and policy-induced barriers. Inconsistent regulations, high taxation, input monopolies, and weak enforcement mechanisms collectively hinder market contestability, raise entry and expansion barriers, and distort competitive outcomes. Addressing these issues would be essential to promote a more competitive, efficient, and balanced cement market.

P	E	S	T	E	L
Policy Dependence	**Cost Burden**	**Market Distortions**	**Efficiency Constraints**	**Resource Risks**	**Regulatory Disparities**
◦ Government infrastructure spending ◦ Uneven policy ◦ Weak inter-provincial coordination	◦ High capital and fixed costs ◦ High energy and transport costs ◦ Rising tax burden ◦ Reduced demand and entry barriers	◦ Urbanization and population growth ◦ Seasonal construction fluctuations ◦ Smuggling and informal imports ◦ Counterfeit cement	◦ Efficiency gains from modern plants ◦ High investment requirement ◦ Fuel supply disruptions ◦ Disincentives for captive power	◦ Water scarcity ◦ Environmental compliance costs ◦ Inconsistent enforcement ◦ Climate and resource risks	◦ Provincial disparities in limestone royalty ◦ Axle load limits ◦ Monopoly in coal handling ◦ Levies on fuels

6 Conclusions and Recommendations

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1. Conclusions

173. The cement industry serves as a base for the overall construction sector, which has enormous linkages with the rest of the economy. In a labor abundant country like Pakistan, the role of the construction and housing cannot be ignored in generating the economic growth and economic activities. This Report has presented an overview of the cement industry in Pakistan focusing on competitive landscape. The Report highlights that despite a diffusion of market share across a number of undertakings, there are certain competition concerns, which need to be addressed for market development and promotion of competition. This Chapter presents the conclusions and recommendations emerging from the competition assessment of the cement industry.

174. The major findings of this Report are as under:

i. Generally, cement demand can be classified into broad categories of housing and infrastructure development requirements. It is estimated that over the half of the cement demand is generated by housing, and the rest accounts for infrastructure. These, in turn, have underlying factors, for instance housing demand depends on natural growth based on demographics of population, migratory needs due to natural disasters/ law and order (internally displaced persons), and replacement (depends on standard of living improvement) /disaster affected. Urban housing needs in the country are increasing as currently, the housing requirement is estimated at 38 million units, assuming one housing unit per household, based on the Population Census 2023, which reports a population of 241 million[41]. This reflects the importance of the cement industry in meeting the country's housing demand.

ii. Pakistan's road network and its development is of core significance since over 96%[42] national passenger traffic and freight movement takes place by land. The demand for cement is rising and is expected to rise more under the CPEC infrastructure projects. The path to high economic growth rate, planning for dams and public sector spending on construction of highways and other mega projects, the trend in demand is expected to be upward in future.

iii. The industry has witnessed a substantial increase in the production capacity from 45.62 million tons in FY 2016 to 84.58 million tons in FY 2025. The expansion in capacity reflects significant investment and growth potential in the sector. During FY24, PSDP budget allocation was around PKR 940 billion of which around PKR 659 billion was disbursed. The budget allocation for PSDP for FY 25 was around PKR 1100 billion of which PKR 596 had been utilized. However, the actual disbursements have consistently

[41] https://pmrc.com.pk/wp-content/uploads/2025/01/A-Comprehensive-Analysis-of-Pakistans-Housing-Market-Summarized-Report.pdf
[42] The Pakistan Development Review 63:2 (2024) pp. 325–352

lagged behind the allocated amounts indicating possible delays in project execution or fiscal constraints. Although disbursements show a slight recovery in 7MFY25, they remain below budgeted levels. The persistent underutilization of PSDP funds may adversely affect the timely execution of infrastructure projects, which in turn has implications for sectors such as cement that are closely linked to public development spending.

iv. The price of cement like any other commodity depends on supply and demand dynamics. Anything that impacts either supply or demand (or both) changes the price. Based on information gathered from cement manufacturers and an analysis of the cost structure, it is observed that the increase in cement prices is primarily attributable to rising production costs and the impact of taxation, particularly Federal Excise Duty (FED) and sales tax. However, the possibility of anti-competitive practices cannot be ruled out. Keeping in view the specifics of the Pakistani market, it would be prudent to maintain a structured and continuous assessment of production and pricing trends within the industry, with a view to fostering transparency, informed decision-making, and overall market efficiency.

6.2 Recommendations

175. In the light of the analysis and the findings of the competition assessment based on the information gathered from the industry stakeholders, following are the recommendations to address the issues and competition concerns:

6.2.1 Development of the Minerals Sector

176. Balochistan has vast natural resources. Efforts are needed for scientific exploration and use of minerals resources such as coal and gypsum, etc. The establishment of cement manufacturing plants at Quetta, Kalat, Mastung, Loralai, Lasbella may be explored to make the South Zone of the industry more vibrant and provide cheaper cement due to reduced transportation cost. Sea water utilization for cement manufacturing and construction projects needs to be explored. It is recommended that the market entry may be promoted through the development of minerals sector instead of erecting barriers and restricting approvals.

6.2.2 Synchronize Axle-Load Enforcement with Logistics Modernization and Multi-Axle Fleet Incentives

177. The National Highway Authority (NHA's) axle-load regime serves legitimate objectives of road safety and infrastructure protection. However, its fragmented and uneven enforcement has imposed disproportionate costs on logistics-intensive industries such as cement. Reduced permissible loads have increased transportation costs for both finished cement and key inputs like coal, contributing to higher production costs and prices. It is therefore, recommended that axle-load enforcement be harmonized across NHA and provincial jurisdictions and implemented in tandem with logistics modernization. This may

include a phased and predictable enforcement framework, coupled with targeted incentives for the adoption of compliant multi-axle and modern vehicle fleets, such as reduced tolls or fiscal support. A synchronized and incentive-based approach would help achieve infrastructure protection goals while minimizing cost distortions, lowering barriers to entry and expansion, and ensuring a level playing field across regions.

6.2.3 Harmonization of Provincial Limestone Royalty Regimes to Preserve Competitive Neutrality

178. The existing disparity in provincial royalty structures for limestone both in terms of rate and the method of calculation has created structural cost asymmetries within the cement industry. In particular, Punjab's ad valorem royalty at 6 percent of the ex-factory cement price imposes a disproportionately higher and price-linked burden on manufacturers compared to the fixed per-ton royalty regimes applied in Sindh, Khyber Pakhtunkhwa, and Balochistan. These inconsistencies distort cost competitiveness, influence pricing and investment decisions, and undermine competitive neutrality across provinces.

179. Keeping in view the above, it is recommended that the provincial governments, through an appropriate inter-provincial coordination mechanism as envisaged in Article 153 of the Constitution move toward harmonization of limestone royalty regimes by adopting a uniform and transparent methodology preferably a fixed per-ton rate benchmarked to extraction costs and inflation rather than output prices. Such harmonization would reduce inter-provincial cost distortions, ensure predictability for investors, and promote fair competition while preserving provincial revenue interests.

6.2.4 Facilitate the Introduction of Alternative Coal Handling Terminals to Enhance Port-Side Competition, mitigate monopolistic dependence on PIBT

180. The current reliance on a single coal handling terminal at the port has created a monopolistic bottleneck, resulting in limited choice for coal importers and downstream industries such as cement. This concentration of market power constrains competition, weakens price discipline, and exposes importers to unilateral tariff setting, service terms, and operational conditions, thereby increasing input costs and business uncertainty.

181. It is therefore, recommended that the government may actively facilitate the entry and operationalization of alternative coal handling terminals by enabling multiple terminals to operate in parallel would introduce competitive pressure on tariffs and service quality, reduce systemic dependence on PIBT, and strengthen supply chain resilience, ultimately lowering input costs and promoting efficient competition in coal-dependent industries.

6.2.5 Ensure Tax Policy Consistency through a Medium-Term Framework for FED and Sales Tax

182. Frequent and unannounced changes to tax laws, levies and duties on cement have contributed to price volatility, cost uncertainty, and weak investment planning in the

cement sector. Given the pass-through nature of indirect taxes, such fluctuations are directly reflected in cement prices, amplifying inflationary pressures in the construction and housing sectors and undermining demand predictability.

183. Keeping in view the above, it is recommended that the government may adopt a medium-term tax policy framework for FED and sales tax on cement, with clearly defined rates, adjustment rules, and timelines announced in advance. A stable and predictable tax regime would reduce price volatility, improve planning certainty for manufacturers and downstream users, limit opportunistic price adjustments, and support a more competitive and investment-friendly environment while safeguarding revenue objectives.

6.2.6 Rationalize Energy Pricing through Cost-Reflective and Time-of-Use Tariff Structures

184. Recent fiscal and regulatory interventions particularly the imposition of petroleum, climate support, and off-the-grid levies on fuels used by Captive Power Plants (CPPs) have significantly increased the variable cost of self-generation in the cement sector. As evidenced by the quantified impact, levy-induced costs alone add approximately PKR 2,180 per ton of cement, making policy-imposed charges, rather than underlying fuel prices, the dominant driver of energy costs. This has rendered furnace oil-based CPPs largely unviable and materially eroded the cost efficiency of gas-based captive generation, despite CPPs historically serving as a reliable and efficient alternative to an electricity grid characterized by high losses and capacity payments.

185. In view of the forgoing, it is recommended that energy pricing be rationalized by adopting cost-reflective tariffs and well calibrated time-of-use (ToU) structures across both grid and captive energy supply options. Fuel levies on CPPs should be reviewed and aligned with actual system costs and environmental objectives. A neutral and transparent energy pricing framework that allows firms to optimally choose between grid and self-generation based on true economic costs would reduce cost volatility, enhance competitiveness in the cement sector, and shift policy focus toward addressing structural inefficiencies in the national power system rather than transferring their burden onto the industry.

6.2.7 Strengthen Border Compliance to Prevent Untaxed and Uncertified Cement Imports

186. Weak border enforcement and compliance gaps have enabled the inflow of untaxed and uncertified cement, undermining domestic manufacturers that fully comply with tax, quality, and regulatory requirements. Such imports evade sales tax, FED, and mandatory quality certifications, allowing them to be sold at artificially lower prices. This creates unfair competition, erodes government revenue, and poses risks to construction quality and consumer safety.

187. It is therefore, recommended that border compliance may be strengthened through coordinated enforcement by customs, tax authorities, and standards regulators, including mandatory verification of tax payment and quality certification (PSQCA) at entry points.

The deployment of digital tracking, risk-based inspections, and joint border task forces would help curb leakages, ensure regulatory parity between domestic and imported cement, and restore competitive neutrality while safeguarding public revenue and construction standards.

6.2.8 Strengthening Competition Enforcement against Trademark Misuse and Counterfeiting

188. Trademark misuse, counterfeiting, and deceptive marketing practices are being addressed through the Competition Act, 2010 as such conduct distorts competition, misleads consumers, and creates an uneven playing field by granting unlawful advantages to non-compliant firms. These practices fall within CCP's jurisdiction, particularly in relation to deceptive marketing practices and conduct that undermines competitive neutrality under the Competition Act, 2010.

189. Accordingly, undertakings affected by trademark misuse or counterfeit products are encouraged to formally bring such practices to CCP's attention by filing a formal complaint. Timely reporting would enable CCP to examine these practices from a competition law perspective and take appropriate enforcement action where the conduct restricts, distorts, or prevents competition.

6.2.9 Introduce fiscal and non-fiscal incentives for green energy and alternative fuel projects

190. Introduce a comprehensive package of fiscal and non-fiscal incentives to encourage the adoption of green energy and alternative fuel solutions within the cement sector, which include targeted tax credits, reduced import duties on renewable energy equipment, waste heat recovery systems, and concessional financing for investments in energy-efficient technologies and alternative fuel infrastructure.

191. Encouraging public–private partnerships, ensuring reliable access to alternative fuel supply chains (such as refuse-derived fuel and biomass), and promoting research and development in sustainable production methods can further strengthen the transition.

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