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ICMA Roadmap for Developing a Progressive Industrial Policy

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Institute of Cost and Management Accountants of Pakistan

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ABBREVIATIONS

AMP	:	Advanced Manufacturing Partnership
DPE	:	Department of Public Enterprises
EXIM	:	Export Import Bank of Pakistan
GFCF	:	Gross Fixed Capital Formation
IDBP	:	Industrial Development Bank of Pakistan
IAC	:	Industry Advisory Council
ICMAP	:	Institute of Cost and Management Accountants of Pakistan
LSM	:	Large-Scale Manufacturing
MEP	:	Manufacturing Extension Partnership
MMBTU	:	Metric Million British Thermal Unit
MMcf	:	Million Cubic Feet
MFA	:	Multifiber Arrangement
OGRA	:	Oil and Gas Regulatory Authority
PBS	:	Pakistan Bureau of Statistics
PICIC	:	Pakistan Industrial Credit and Investment Corporation
SMEDA	:	Pakistan Small and Medium Enterprise Development Authority
PPIB	:	Private Power and Infrastructure Board
SECP	:	Securities and Exchange Commission of Pakistan
MSMEs	:	Small, Medium, and Micro Enterprises
SBP	:	State Bank of Pakistan
TREDS	:	Trade Receivables Discounting System

CONTENT

FOREWORD

I am delighted to present this comprehensive guide, offering an in-depth analysis of Pakistan's industrial policy framework as outlined in the ICMA Roadmap for Developing a Progressive Industrial Policy. The industrial sector, a key driver of economic growth, holds profound implications in stimulating overall economic activities in an economy. This collaborative work by ICMA Research Team is not merely a blueprint; it is an economic tool and can be employed as a guide by the policy makers and the recently established Industry Advisory Council (IAC) by the federal government of Pakistan to achieve a resilient, innovative, and globally competitive industrial landscape. As readers explore the chapters, they will find invaluable insights, analyses and strategic recommendations proposed by the ICMA.

Chapter 1: The chapter explains the evolution of Pakistan's industrial policies from 1948 to 2023 reflects a transition from import substitution to liberalization and export-oriented growth. While initial policies aimed at reducing import dependency, subsequent strategies under Ayub Khan diversified industries geographically, and the 1990s witnessed a shift towards liberalization and privatization. Challenges persist, including infrastructure deficiencies, outdated technology, and a shortage of skilled workers. However, opportunities lie in export-led growth, diversification, and innovation. Future policy recommendations emphasize the need for a comprehensive industrial strategy to build a resilient industrial sector contributing significantly to economic growth and prosperity.

Chapter 2: This chapter highlight the key challenges face by the manufacturing sector in Pakistan that collectively hinder its growth and competitiveness. The power and gas crises, characterized by electricity shortages and escalating gas charges, disrupt industrial operations and inflate production costs. The economic downturn, marked by rising interest rates, inflation, and a depreciating currency, adds to the financial burden on businesses, affecting investment decisions and overall profitability. Low-capacity utilization due to demand deficiency, coupled with a complex tax structure and cumbersome regulatory compliance, further constrains the sector. The competition with smuggled goods in the market exacerbates the difficulties, the lack of modern infrastructure facilities, weak supply chains, and insufficient capital investment hinder the sector's productivity and global competitiveness. The absence of value-added production in exports reflects a need for diversification and innovation to enhance Pakistan's position in the global market. The proposed collaborative approach is needed between the government, private sector, and international stakeholders to overcome these obstacles to strengthen the sector's global standing.

Chapter 3: ICMA identify the requirement of unified firm size definition for all institutions in Pakistan, which supports identify the policy makers to generate an efficient policy based on firm size for better economic growth. The discrepancies in definitions by different government institutions which is not align with the international standards, underscore the need for definition harmonization to address the challenges posed by inconsistent support programs, uncertain access to finance, and policy implementation hurdles. The comparison with country-specific definitions of firm size, such as India, China, Bangladesh and IFC (World Bank) provide a standardized approach. Additionally, the proposed definition of firm size by ICMA, provides a comprehensive economic framework that not only considers quantitative system of measurement but also emphasizes resource utilization, market presence, innovation, and sustainability. This ICMA's proposition aims to create a transparent and encouraging environment for businesses in Pakistan.

Chapter 4: In this chapter, the ICMA proposes policy objectives to enhance the growth and development of Industrial sector of Pakistan. Such as to enhance the LSM sector's annual growth rate, increase the Installed production capacity of renewable energy infrastructure, increase the employment rate within the industrial sector, short run and long run objectives to boost the exports of manufacturing sector and attract twin Investment in the LSM sector of Pakistan.

Chapter 5: In Chapter 5, ICMA propose a wide-ranging long term action plan for ten years for the industrial sector, such as driving economic growth through manufacturing sector, enhancing renewable energy resources to obtain economic competitiveness and self-sufficiency. The multifaceted strategies also include virtual cluster and digital directory of manufacturing firms to strengthen the supply and an investor-friendly environment and reinforcing economic interconnectedness. these strategies can become an economic tool for policy makers to achieve sustained economic growth and global competitiveness of in Pakistan's industrial sector.

Chapter 6: Lastly, this Chapter presents the review of other countries' industrial policies, such as India, Bangladesh, Russia, and the USA, revealing diverse strategies for driving economic growth and strengthening global competitiveness. India's approach to encompass demand stimulation, MSME promotion, and Industry 4.0 adoption, demonstrating a clear understanding of their economic objectives. Bangladesh pursues economic prosperity through technological advancements, emphasizing infrastructure, social security and human resource development, particularly in the Leather and Leather Goods Industry. Russia focuses on aerospace, automotive, and technology, developing innovation through industrial clusters and a dedicated fund. In the USA, collaborative initiatives like the Advanced Manufacturing Partnership and workforce development programs underscore a commitment to advanced manufacturing and global competitiveness. Each country adopts its policies to unique economic landscapes, showcasing the complex relationship between government, industry, and academia in driving sustainable economic development.

Muhammad Yasin, FCMA
Vice President ICMA and
Chairman, Research and Publications Committee

Preamble

In every economy, the industrial sector plays a key economic driver of growth and development. And its uninterrupted operations are essential for a prosperous life and living standard of the population of a country. Observing the current economic scenario and a dying need for an industrial policy of Pakistan, The Research and Publication department of Institute of Cost and management Accountants of Pakistan (ICMA) is delighted to present its publication "ICMA Roadmap for Developing a Progressive Industrial Policy".

This publication is designed as an economic tool and guide for policymakers, the Industry Advisory Council (IAC) recently established by Pakistan's federal government, and researchers aiming to build a resilient, innovative, and globally competitive industrial landscape. A statement from the Ministry of Industries indicates that the government plans to finalize the National Industrial Policy by October–November 2024. The book serves as a valuable resource for ICMA members, students, industry professionals, and academia. Readers will find insightful analyses and strategic recommendations from ICMA as they explore each chapter.

The book explains the evolution of Pakistan's industrial policies from 1948 to 2023 which reflects a transition from import substitution to liberalization and export-oriented growth. Also, ICMA highlights the impediments faced by Pakistan's industrial sector, such as power crises, high cost of borrowing, unfavorable investment environment, competition with smuggled goods and globally uncompetitive. The need of unified firm size definition for all institutions in Pakistan is also mentioned in the book, which supports the policy makers to generate an efficient policy based on firm size for better economic growth.

ICMA highlights the strategic policy objectives to elevate Pakistan's Manufacturing sector, on the basis current economic challenges of industry, such as emphasizing growth, enhance renewable energy resources, increase industrial employment, attract twin investment and exports.

On the basis of these impediments, ICMA propose a wide-ranging long term action plan for ten years for the industrial sector, such as driving economic growth through manufacturing sector, enhancing renewable energy installed capacity to obtain economic competitiveness and self-sufficiency, create an investment-friendly environment and reinforcing economic interconnectedness. To view the global side, the book also contains the present industrial policy review of other countries, such as India, Bangladesh, Russia, and the USA. Which provides several approaches to economic growth, innovation, and global competitiveness.

CHAPTER 01

Evolution of Pakistan's Industrial Policy

Chapter 1

Evolution of Pakistan's Industrial Policy

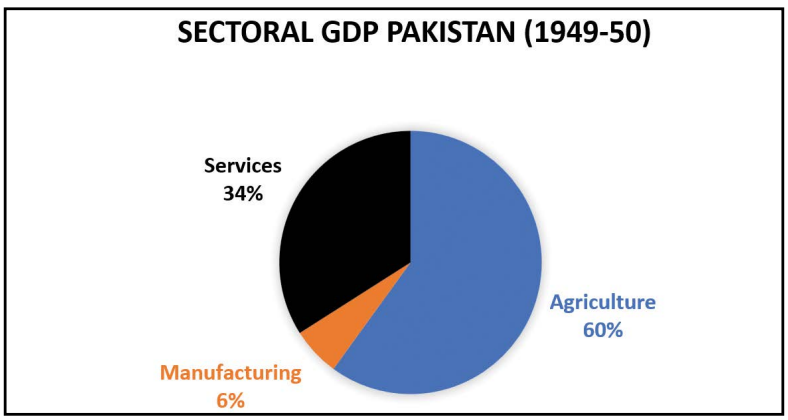
Industrial policy refers to the strategic framework adopted by governments to promote and regulate the growth of their industrial sectors. It involves a range of measures such as subsidies, tax incentives, and research funding to encourage innovation and productivity. These policies vary based on each nation's unique economic challenges and goals. Ultimately, industrial policies aim to create a favorable environment for businesses, stimulate economic growth, generate employment, and improve the overall economic well-being of the country.

Pakistan has experimented with many distinct industrial strategies since its establishment, often in response to crises or as initiatives by new administrations. However, these methods were predominantly reactive, implemented to overcome immediate challenges rather than fostering long-term economic progress. Long-term planning and the pursuit of economic prosperity were not the primary objectives in these approaches.

Industrial policy (1948)

After gaining independence, Pakistan inherited merely 34 industrial units out of the 921 existing in the subcontinent. These units were primarily engaged in sectors such as cotton textile, cigarettes, sugar, rice husking, cotton ginning, and flour milling. Over all the total manufacturing sector had the share of 6% in the GDP during the year of 1949-50. The Figure 1.1 shows the combined statistics of East and West Pakistan.

Figure 1.1



Source: Developed by ICMA from Third Five-year Plan, Government of Pakistan

Pakistan's first national industrial policy was formulated soon after its independence in 1947. The country's first industrial policy was introduced in 1948, outlining the framework for industrial development in the newly formed nation. This policy was primarily focused on promoting import substitution industrialization strategy, a common approach among many developing countries during that time.

The key objectives of Pakistan's first industrial policy of 1948 included:

(a) reducing dependency on imports
(b) encouraging domestic industrial production, and
(c) fostering economic self-sufficiency.

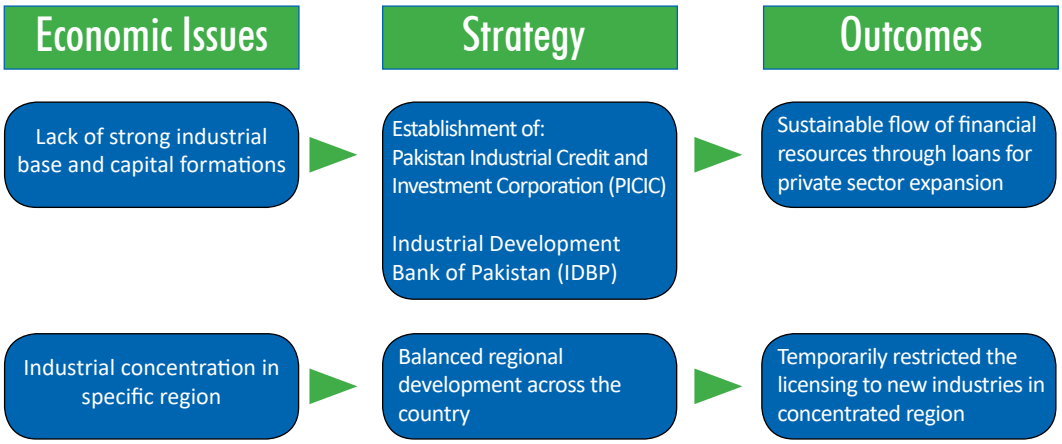
The policy aimed to achieve these goals by offering various incentives to the industrial sector, such as subsidies, tax concessions, and technical assistance. These measures were designed to attract investments, both foreign and domestic, and stimulate the growth of industries within the country.

During this period, the government played a significant role in establishing the basic industries, such as steel mills, cement plants, and chemical factories. process, owning and managing several key industries. One of the primary goals of the policy to reduce imports dependency was also achieved and there was a noticeable decrease in certain imported goods as domestic production capacity increased.

Industrial policy (1956)

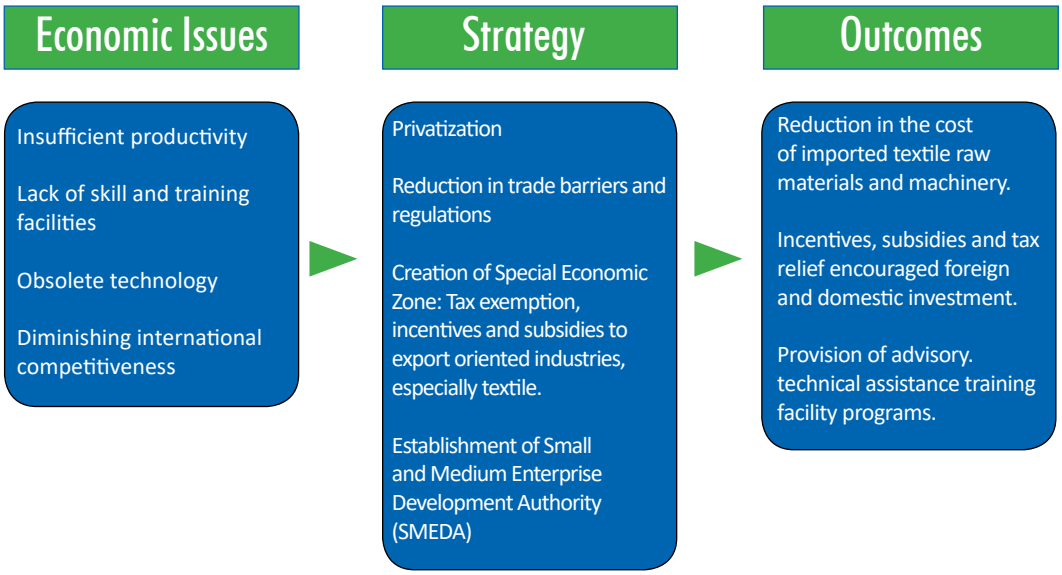
During Ayub Khan's regime, Pakistan implemented two consecutive five-year plans that embraced a strategy of industrialization. This approach was characterized by licensing private industry owners and establishing publicly owned financial organizations to facilitate loans to private companies. Two key institutions created for this purpose were the Pakistan Industrial Credit and Investment Corporation (PICIC) and the Industrial Development Bank of Pakistan (IDBP). These institutions were financially supported by the World Bank and played a pivotal role in shaping Pakistan's industrial landscape by enabling Pakistani government to undertake large scale industrials project, and ensured the availability of financial resources to the private enterprises to expand their operations and invest in new ventures.

One of the notable aspects of this industrialization strategy was the geographical diversification of industrial activities. Previously, industrial development in Pakistan was heavily concentrated in Karachi. However, under Ayub Khan's economic policies, industrial operations were encouraged in various regions across the country. This decentralization of industries aimed to promote balanced regional development and reduce the concentration of economic activities in one area.



Industrial policy (1990s)

In the 1990s, Pakistan implemented a wide-ranging economic reform program, focusing on liberalization and privatization. The government embraced liberalization by reducing trade barriers and encouraging foreign investments to enhance global competitiveness. Privatization was a key strategy, involving the transfer of state-owned enterprises to the private sector to boost efficiency and alleviate fiscal pressure. Export-oriented industries were promoted through incentives and the creation of Special Economic Zones, expanding beyond traditional textiles. Simultaneously, efforts were directed towards strengthening the financial sector to attract foreign investments. Investments were also channeled into education and skill development to foster a skilled workforce. In 1998, Pakistan's Small and Medium Enterprise Development Authority (SMEDA) played a vital role in supporting small and medium-sized businesses. SMEDA provided advisory services, technical support, and training to entrepreneurs, helping them enhance their skills and develop their businesses. It facilitated SMEs in accessing financial resources and credit, enabling them to invest in their enterprises. Priority was also given to infrastructure development, with significant investments in energy, transportation, and telecommunication sectors, crucial for reducing business costs and attracting investments.

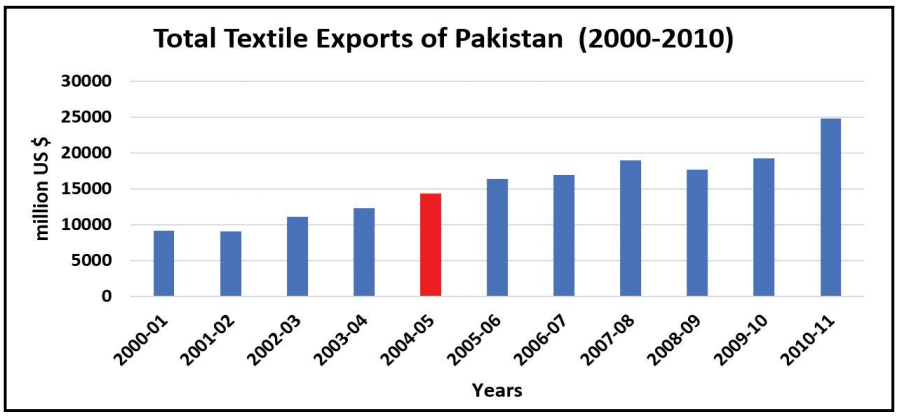


Industrial policy (2005)

In 2005, the Multi-Fiber Arrangement (MFA) came to end. It was an agreement which was imposed by the international trade regulating agency of textile sector, in which quotas were imposed on the quantity of textiles and garments that developing countries could export to developed countries. In the Figure 1.2, the red bar shows the end of MFA year in 2004-05, which depicts the start of a significant impact on Pakistan's textile sector. On a positive note, the removal of quotas facilitated a notable surge in textile and garment exports, enabling the industry to expand its international market presence. Additionally, Pakistan diversified its export destinations, reducing reliance on a few buyers, and attracted foreign investments due to its competitive labor costs and skilled workforce.

However, challenges emerged as well. The removal of quotas intensified global competition, particularly from countries like China and India, which possessed advantages in economies of scale and advanced technology. This heightened competition made it difficult for Pakistan to compete, especially in markets sensitive to pricing. Moreover, adhering to international quality standards became imperative post-2005, demanding a significant focus on product quality to stay competitive. Furthermore, Pakistan's heavy dependence on textile exports left its economy vulnerable to fluctuations in global demand and prices. Consequently, the country faced economic challenges when global demand decreased, underscoring the need for diversification and resilience in the face of market fluctuations.

Figure 1.2



Source: All Pakistan Textile Mills Association (APTMA), designed by ICMA (Red Bar in the above graph represents the MFA expiry year).

(MFA) Expiration Gains	Challenges
Increase in market share in textile exports Increase in FDI being labour abundant economy. Enhanced efficiency and quality of products.	Stiff global competition due to lack of industrial resources. Exposure to global vulnerability due to over dependency on textile exports

Industrial Policy (2011 and Onwards)

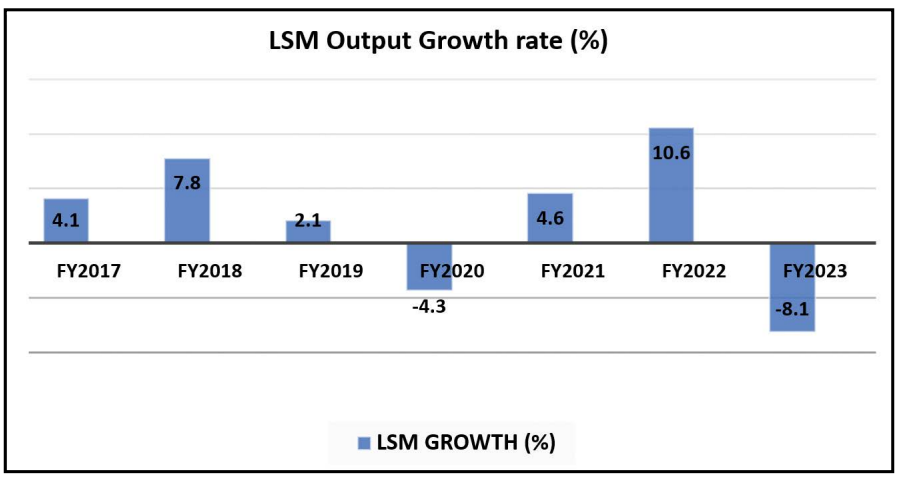
Manufacturing growth in Pakistan has historically been driven by the expansion of labor and capital inputs, with limited contributions from total factor productivity, particularly in recent decades. Notable exceptions occurred in the 1980s and, to a lesser extent, between 2001 and 2005. The industrial policy framework initiated in the planning periods from 2011 onwards aimed to address this limitation by promoting more efficient resource utilization and enhancing total factor productivity. Larger firms have shown higher productivity compared to medium and small-sized enterprises due to scale economies and access to modern production techniques.

However, constraints such as outdated technology, high shipping costs, unreliable electricity supply, a shortage of skilled workers, limited access to finances, and weak supporting industries continue to impact firm-level productivity. To overcome these challenges and enhance industrial competitiveness, the government outlines a strategy focusing on three key reform areas:

(a) developing a new industrial policy
(b) transitioning to export-oriented growth, and
(c) making investments in economic infrastructure and human and technological resources.

The absence of a coherent manufacturing strategy in Pakistan has resulted in disjointed policies, inconsistent incentives, and sporadic subsidies, hindering the sector's progression toward more sophisticated goods. The proposed mixed approach policy, combining generalized policies with temporary incentives for specific sectors like textiles, dairy, and engineering, aims to rectify historical biases and foster export-oriented growth, addressing long-standing challenges in the country's industrial landscape.

Figure 1.3

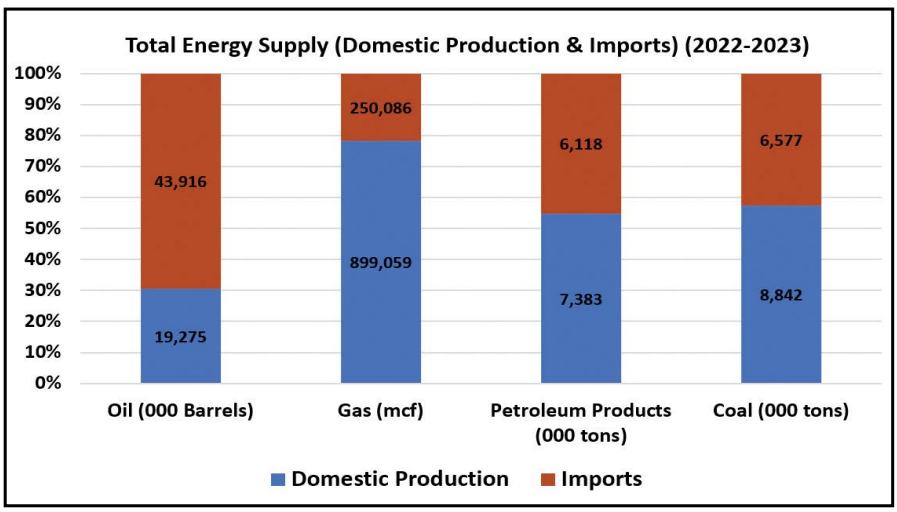


Source: Pakistan Bureau of Statistics

The figure 1.3 shows LSM growth rates in Pakistan, as depicted in the provided data spanning fiscal years 2017 to 2023, offer insights into the sector's dynamic performance. The positive growth in FY2017 and FY2018, at 4.1% and 7.8% respectively, initially suggested a resilient and expanding LSM sector. However, the subsequent slowdown in FY2019 to a growth rate of 2.1% and the sharp contraction of -4.3% in FY2020 underscored the sector's vulnerability to economic headwinds, including the global economic slowdown and the disruptive impacts of the COVID-19 pandemic. The recovery in FY2021 with a growth rate of 4.6% indicated adaptive responses within the sector.

Notably, FY2022 witnessed an extraordinary surge with a growth rate of 10.6%, signaling a robust expansion likely driven by strategic policies, increased demand, or other positive economic stimuli. However, the abrupt downturn in FY2023, marked by a negative growth rate of -8.1%, raises concerns and demands a closer examination of factors contributing to this contraction.

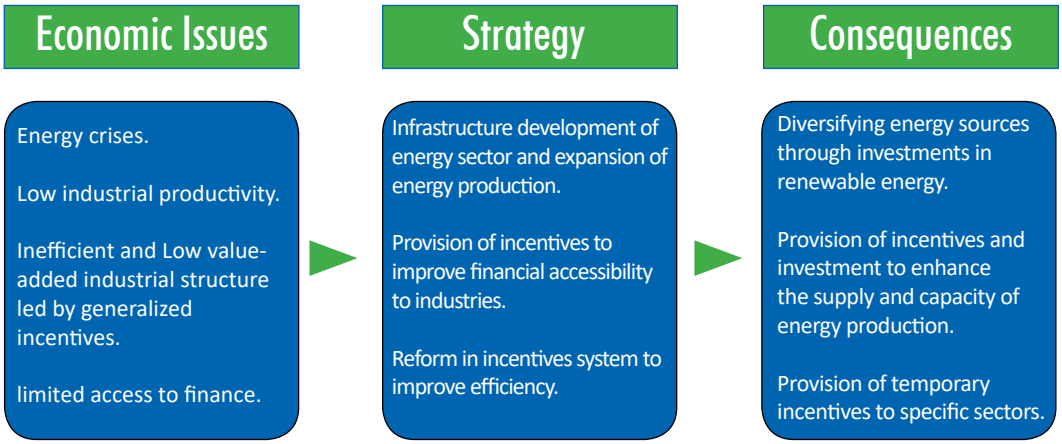
Figure 1.4



Source: Ministry of Energy, calculated by ICMAP

In the period from 2011 onwards, Pakistan confronted a severe energy crisis marked by shortages and inadequate supply of electricity and gas. In response, the government implemented a series of policies, including diversification of energy sources with investments in renewables and restructuring of energy institutions. These measures aimed to stimulate sustainable economic growth and create a conducive investment environment.

The figure 1.4 shows the heavy reliance on imported fuels, exposing the country to global fuel price fluctuations causing high energy costs for industries. The circular debt issue in the energy sector, characterized by delayed payments, further compounds costs, reaching an alarming Rs 2.31 trillion as of June 2023. This financial instability disrupts the sector, leading to increased production expenses for industries. The challenge of circular debt poses a significant hurdle to achieving a stable and affordable energy supply in Pakistan.



Chapter Summary

The evolution of Pakistan's industrial policies from 1948 to 2023 reflects a transition from import substitution to liberalization and export-oriented growth. While initial policies aimed at reducing import dependency, subsequent strategies under Ayub Khan' regime diversified industries geographically, and the 1990s witnessed a shift towards liberalization and privatization. Challenges persist, including infrastructure deficiencies, outdated technology, and a shortage of skilled workers, coupled with macro-economic issues like weak currency, rise in inflation etc. However, opportunities lie in export-led growth, diversification, and innovation. Future policy recommendations emphasize the need for a comprehensive industrial strategy, infrastructure development, support for SMEs, technological innovation, sustainable practices, and active global engagement. By addressing these aspects, Pakistan can build a resilient industrial sector contributing significantly to economic growth and prosperity.

CHAPTER 02

Impediments to Industrial Sector of Pakistan

Chapter 2

Impediments to Industrial Sector of Pakistan

Preamble

This study focuses specifically on the challenges faced by Pakistan's LSM sector, delving into the intricacies of obstacles encountered within this segment. Pakistan's manufacturing sector grapples with persistent shortages in utilities like power, gas and water, disrupting production and increasing operational costs. A complex tax system and insufficient demand for goods create planning challenges, leading to low-capacity utilization and reduced economic contribution. Rising input prices and bureaucratic hurdles further squeeze profit margins for manufacturers. Outdated infrastructure, weak supply chains, and economic downturns add pressure, affecting financial stability and investment capabilities. Illicit trade and limited access to capital hinder growth and innovation. The sector also lacks emphasis on value addition, impacting the quality and diversity of manufactured goods in the global market.

To effectively tackle these challenges, it is crucial to implement comprehensive reforms. These reforms should cover efficient tax restructuring, investment in infrastructure development, incentives to drive industrial innovation, research and development, and the establishment of stable economic policies. Equally vital is the assurance of a level playing field for the local manufacturing sector and the crackdown on smuggling. These measures are imperative to create an environment conducive to the growth of industries in Pakistan.

Table 2.1

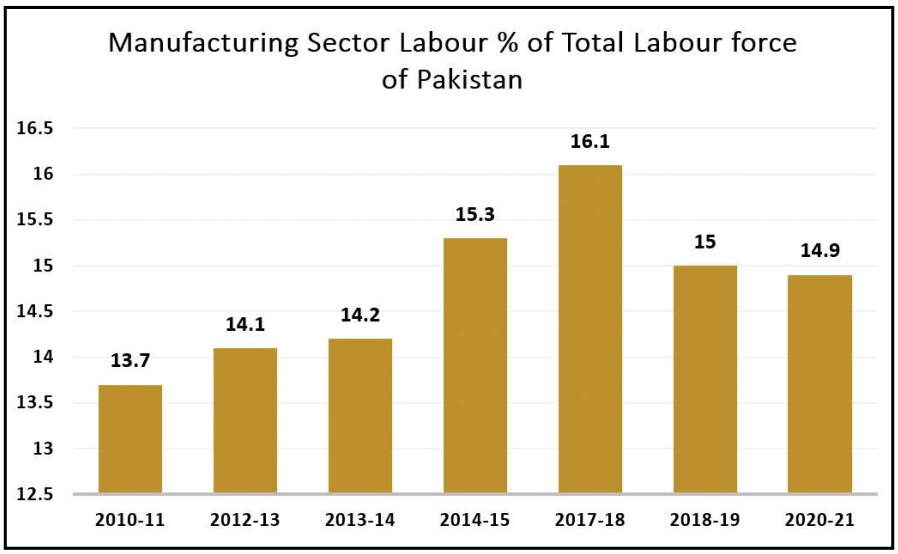
Years	Total Manufacturing Output share % in GDP	Large Scale Manufacturing (LSM) Output share % in GDP	Manufacturing Sector exports
2007-08	12.18	10.23	72.90
2008-09	11.30	9.28	76.29
2009-10	11.33	9.19	73.96
2010-11	11.32	9.09	71.21
2011-12	11.21	8.90	75.06
2012-13	11.32	8.94	73.54
2013-14	11.50	9.05	74.52
2014-15	11.49	8.97	75.91
2015-16	11.21	8.68	78.12
2016-17	11.26	8.66	77.07
2017-18	11.36	8.72	73.95
2018-19	11.58	8.81	73.94
2019-20	10.82	7.92	74.67
2020-21	11.22	8.29	75.39
2021-22	11.87	8.85	75.13
2022-23	11.25	7.98	70.96
2023-24	11.24	7.82	N/A

Source: Total Manufacturing and LSM Output data (Pakistan Bureau of Statistics), Manufacturing Export data (World Bank), Calculated by ICMA

Based on the data in Table 2.1, we can observe several trends in Pakistan's manufacturing sector over the years. The total manufacturing output share in GDP has experienced fluctuations, starting at 12.18% in 2007-08, reaching its lowest point at 10.82% in 2019-20, and showing a slight increase in 2023-24 to 11.24%. This indicates a degree of volatility in the sector's contribution to the overall economy. Similarly, the large-scale manufacturing (LSM) output share in GDP has followed a similar pattern, declining from 10.23% in 2007-08 to 7.82% in 2023-24.

The decline in both total manufacturing output and LSM output shares might be indicative of challenges faced by the sector during the specified period, such as economic uncertainties, policy issues, or global market dynamics. Furthermore, the manufacturing sector exports as a percentage of total merchandise exports have shown a decline from 72.90% to 70.96% during 2007-2024.

Figure 2.1



Source: Pakistan Bureau of Statistics, Labour force Survey

The Figure 2.1 show percentage of total labour force employed by the manufacturing sector of Pakistan. It was observed that from 2010-11 to 2014-15, there was a steady increase in the percentage of the labor force engaged in the manufacturing sector, rising from 13.7% to 15.3%. This growth might indicate an expansion in manufacturing activities during this period, potentially influenced by factors such as increased demand, investments, or favorable policies.

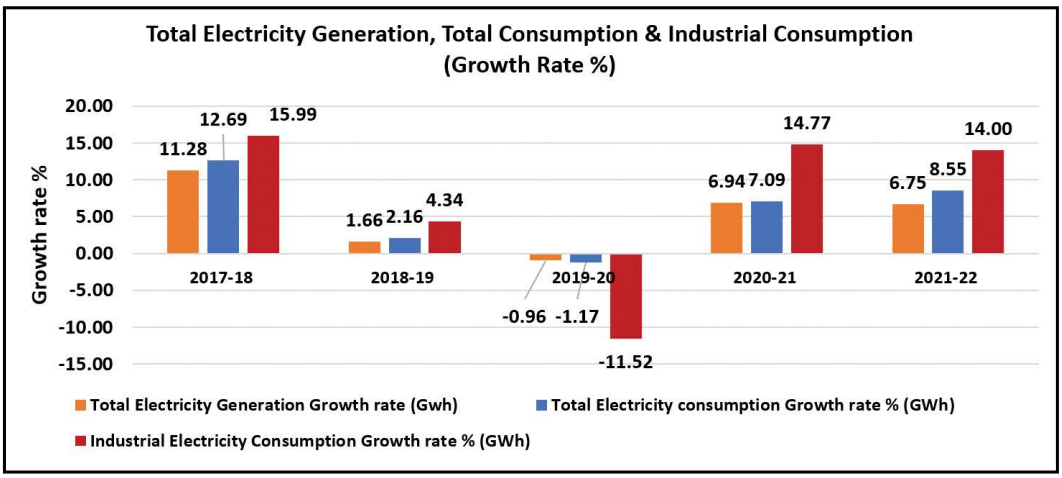
However, there was a fluctuating trend in the subsequent years. The percentage of the manufacturing sector labor force reached its peak at 16.1% in 2017-18 but then declined to 15% in 2018-19 and further to 14.9% in 2020-21. These fluctuations are attributed to various factors such as economic challenges, technological advancements leading to automation, and shifts in demand structure of the economy.

1. Power and Gas Crises

Rise in Electricity Shortfall

Pakistan's industrial sector has long grappled with severe energy challenges, notably in the form of persistent power and gas crises. These crises, stemming from inadequate infrastructure, mismanagement, and a growing demand-supply gap, have had profound implications for the country's industries. Frequent power outages and gas shortages have disrupted production schedules, hindered operational efficiency, and inflated costs for industrial enterprises. The energy deficits have not only stifled growth but also rendered many businesses less competitive in the global market. Addressing these crises is essential for Pakistan's manufacturing sector.

Figure 2.2



Source: National Transmission and Despatch Company, Power System Statistics 47th Edition May 2023, Calculated By ICMAP

The data in Figure 2.2 reflects the intricate dynamics of Pakistan's energy sector from 2017-18 to 2021-22. The growth rates in total electricity generation exhibit variability, with a significant spike in 2017-18 followed by fluctuations in subsequent years. The growth in installed capacity, particularly the substantial increase in 2017-18, indicates efforts to expand infrastructure, although challenges are evident with a decline in 2019-20 with a negative growth. The positive growth rates in electricity consumption signify an escalating demand, notably pronounced in 2021-22. However, a critical observation is the consistent trend of industrial electricity consumption surpassing electricity generation, indicating a persistent demand-supply gap. Addressing this gap through substantial investment in energy infrastructure is vital to ensure stable energy supply, support manufacturing growth, and enhance the sector's resilience, especially in times of economic uncertainty.

Gas Crises

The current scenario in Pakistan's gas sector presents a multifaceted challenge that directly impacts the manufacturing industry and the overall energy stability of the country. The Oil and Gas Regulatory Authority (OGRA) has proposed a significant increase in gas tariffs, citing the need to meet revenue requirements for gas utilities. This move, coupled with regional disparities in gas prices, creates a complex situation for consumers and industries, with higher costs affecting the production landscape. Furthermore, Pakistan's natural gas resources are depleting rapidly, leading to an increased demand-supply imbalance and necessitating fresh exploration efforts. The country's dependence on imported LNG, mainly from Qatar, adds financial strain due to the expensive nature of these imports, further escalating production costs for industries. Experts point out that low gas prices have led to wastage of this valuable resource, highlighting the urgency to raise prices to promote responsible consumption.

Gas Consumption of Industrial sector in Pakistan

Table 2.2

Years	Industrial Gas Consumption (MMCFD)
FY2015-2016	609
FY2016-2017	800
FY2017-2018	741
FY2018-2019	648
FY2020-2021	713
FY2021-2022	664
FY2022-2023	540

Source: OGRA

The gas consumption data for the industrial sector in Pakistan, as reflected in Table 2.2, reveals fluctuating trends in the volume of industrial gas usage over the specified fiscal years. From the peak in FY2016-2017 to the decline in FY2022-2023, the figures indicate variations that may be influenced by factors such as economic conditions, industrial activities, and policy changes. Concurrently, Table 2.3 provides insights into the corresponding gas consumption charges for the industrial sector, depicting an increase in charges over the years. The rising consumption charges, as well as the fixed rates, highlight the economic implications and cost structures faced by industries reliant on gas.

Gas consumption charges for the Industrial sector of Pakistan

Table 2.3

Years	Industrial Gas Consumption charges Rs./MMBTU	Fixed Rate Rs/month
2023	1200	35,540
2020	1,056	35,540
2019	1,021	36,450
2009	382	10,935
2008	339	11,445

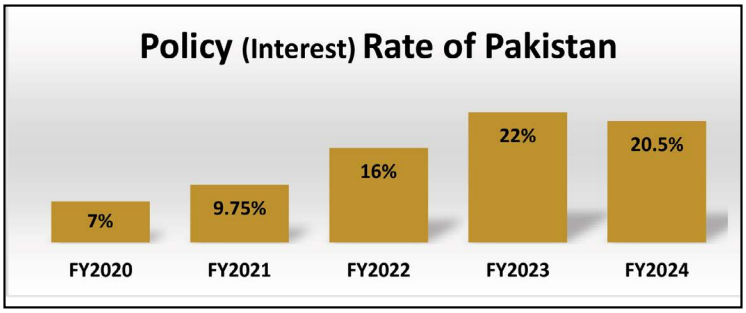
Source: OGRA

The data provided reveals a concerning trend in gas charges in Pakistan over the years. In 2008, the industry faced a relatively lower gas consumption charge of Rs. 339/MMBTU and a fixed rate of Rs. 11,445 /month. However, fast-forward to 2023, and the gas consumption charges have significantly surged to Rs. 1,200/MMBTU, coupled with a fixed rate of Rs. 35,540/month. This sharp increase in gas charges, both in terms of consumption rates and fixed monthly fees, reflects a substantial financial burden on industries operating in Pakistan. The rise in gas charges over the years could be attributed to various factors, including increased demand, supply shortages, or inflationary pressures. Such escalating costs have a direct impact on the overall production expenses for industries, potentially leading to higher commodity prices, reduced competitiveness, and challenges in sustaining profitability.

2. Economic Downturn and Growing Input prices

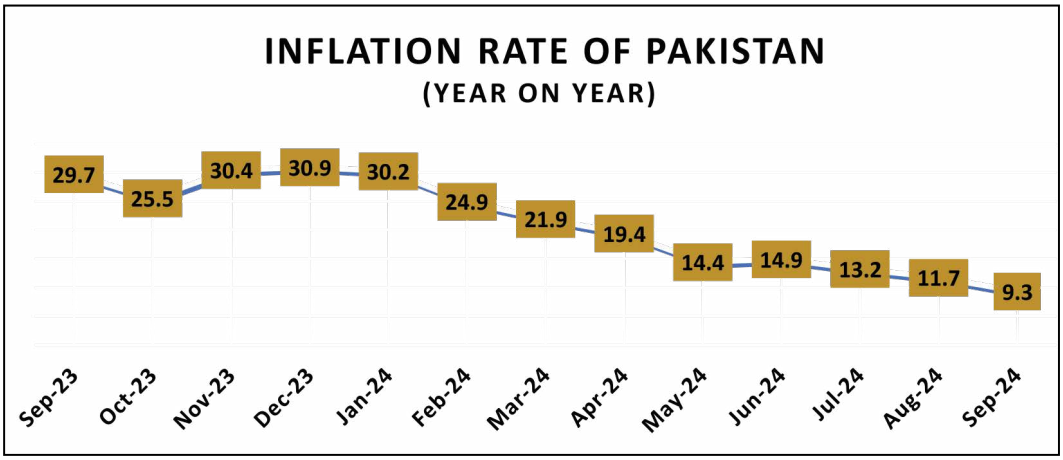
The sharp rise in Pakistan's interest rates over the past few years has had a significant impact on the cost of doing business in the country. The figure 2.3 shows the 7% interest rate in FY2020, the rate climbed to 9.75% in FY2021, indicating a cautious approach by the central bank. However, in subsequent years, the rates surged dramatically from 16% in FY2022 to a staggering 22% in FY2023, but a slightly lower at 20.5% in FY2024. These elevated interest rates have substantially increased the cost of borrowing for businesses. Entrepreneurs and industries relying on loans to finance their operations have faced higher costs, leading to increased expenses associated with servicing debts. This rise in the cost of capital has repercussions throughout the economy, affecting investment decisions, expansion plans, and overall business profitability.

Figure 2.3



Source: SBP

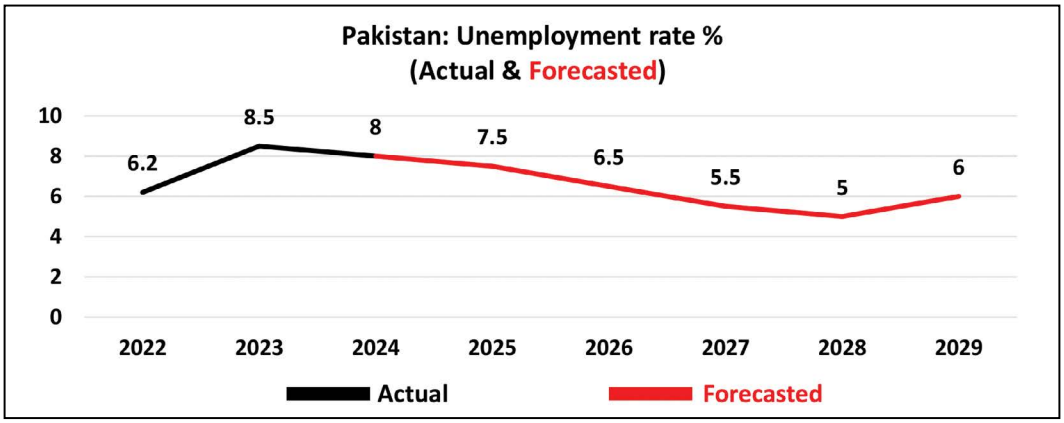
Figure 2.4-A



Source: SBP

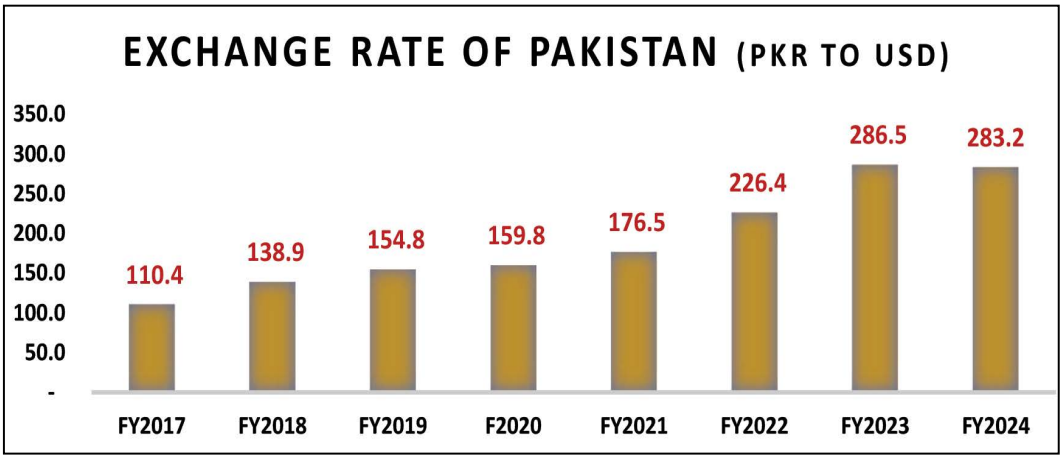
The Figure: 2.4-A and B Shows the inflation rate and the unemployment rate in Pakistan. The recent data in figure:2.4-A reveals that the inflation rate has been decreasing gradually in recent months. But the unemployment rate is still high at 8% in FY2024. The IMF has forecasted that the unemployment rate will go down till 5% but will again rise from FY2029. To ensure the stability the policy makers should take advantage from lowering inflation and unemployment rate and grow the economic activities at a sustainable rate which will reduce the chance of rising unemployment in the future again.

Figure 2.4-B



Source: Actual and Forecasted data is from IMF

Figure 2.5



Source: SBP

The depreciation of the Pakistani Rupee against the US Dollar has multifaceted impacts on Pakistan's manufacturing sector. The figure 2.5 shows the depreciating exchange rate of Pakistan, which raise the cost of imported inputs for the manufacturing industry, such as raw materials and machinery, putting pressure on profit margins. But the considerable depreciation of the exchange rate from FY2021 to FY2024 has the potential to enhance the competitiveness of Pakistani exports in the global market which also reduces unemployment. However, the Pakistani economy faces challenges such as energy crises, inadequate infrastructure, and limited product diversity. These factors prevent the economy from fully capitalizing on the advantage offered by the depreciated exchange rate.

3. Low-capacity utilization due to demand deficiency

The low-capacity utilization in Pakistan's manufacturing sector is due to demand deficiency, which can be attributed to several contemporary factors. One major issue is the economic impact of the COVID-19 pandemic, which has led to decreased consumer spending and business investments. Lockdowns and restrictions have disrupted supply chains and reduced consumer confidence, resulting in lower demand for manufactured goods. Additionally, inflationary pressures and rising costs of living have constrained consumers' purchasing power, leading to reduced demand for products. Furthermore, political instability, energy shortages, and inadequate infrastructure also play a negative role in this and deter both domestic and foreign investments, limiting the sector's growth potential. The exporting industries are also facing low demands from international buyers.

4. Multiplicity of Taxes

The multiplicity of taxes in Pakistan has had a detrimental impact on the manufacturing sector. This complex tax system, involving various federal, provincial, and local taxes, such as excise duties, corporate tax, custom duties, taxes on the capital value of assets, taxes on inputs which are used to produce energy, taxes on production capacity and installation, terminal taxes on sea, rail and air routes trade. These create a burdensome administrative process for businesses. Compliance becomes challenging, leading to increased costs related to tax filing and legal consultations. This situation hampers the growth and competitiveness of the manufacturing sector. Businesses face higher operational costs, reducing their profitability and hindering their ability to operate.

5. Cumbersome regulatory compliance [Ease of doing business]

Table 2.4

Indicator	Rank	Score %
Starting a Business	72	89.3
Dealing with Construction Permits	112	66.5
Getting Electricity	123	64
Registering Property	151	48.6
Getting Credit	119	45
Protecting Minority Investors	28	72
Paying Taxes	161	52.9
Trading across Borders	111	68.8
Enforcing Contracts	156	43.5
Resolving Insolvency	58	59
Overall Rank in the World	108	61%

Source: World bank, Doing business report 2020

Analyzing the Ease of Doing Business in Pakistan (2020) data in table 2.4 reveals a mixed economic landscape. Pakistan performs relatively well in certain areas, such as 'Starting a Business' (ranked 72nd with a score of 89.3%) and 'Protecting Minority Investors' (ranked 28th with a score of 72%). These rankings indicate favorable conditions for entrepreneurs and investors, showcasing the country's potential for business growth and innovation.

However, challenges persist in other areas like 'Registering Property' (ranked 151st with a score of 48.6%) and 'Enforcing Contracts' (ranked 156th with a score of 43.5%), indicating bureaucratic hurdles and inefficiencies within the legal and regulatory frameworks. Moreover, the low ranking in 'Paying Taxes' (161st with a score of 52.9%) highlights complexities in the tax system, potentially deterring businesses. Overall, Pakistan's 108th position globally with a score of 61% reflects the need for comprehensive reforms to create a more conducive environment for businesses, addressing issues related to property registration, contract enforcement, and tax procedures. It is evident that targeted policy interventions and institutional improvements are essential to enhance the ease of doing business, enhancing economic growth and attracting investments in Pakistan.

6. Competition with smuggled goods in the market

The pervasive issue of smuggling from Afghanistan into Pakistan, as evidenced by the alarming statistics and facts presented, exerts a detrimental impact on the country's manufacturing sector. Smuggled goods, ranging from cell phones to essential commodities like diesel, engine oil, and gold, flood the market, distorting fair competition and undercutting legitimate businesses.

With an estimated $3.3 billion worth of smuggled goods penetrating various sectors, the manufacturing industry faces unfair competition, as smuggled products often enter the market at lower prices. The rampant smuggling of items such as cell phones (74%), diesel (53%), and gold (approximately 80 tons annually) not only leads to substantial revenue losses for the government but also disrupts the manufacturing sector's supply chains and market dynamics. Moreover, the inability of law enforcement agencies to seize a significant portion of smuggled goods, approximately 5%, exacerbates the challenges faced by the manufacturing sector.

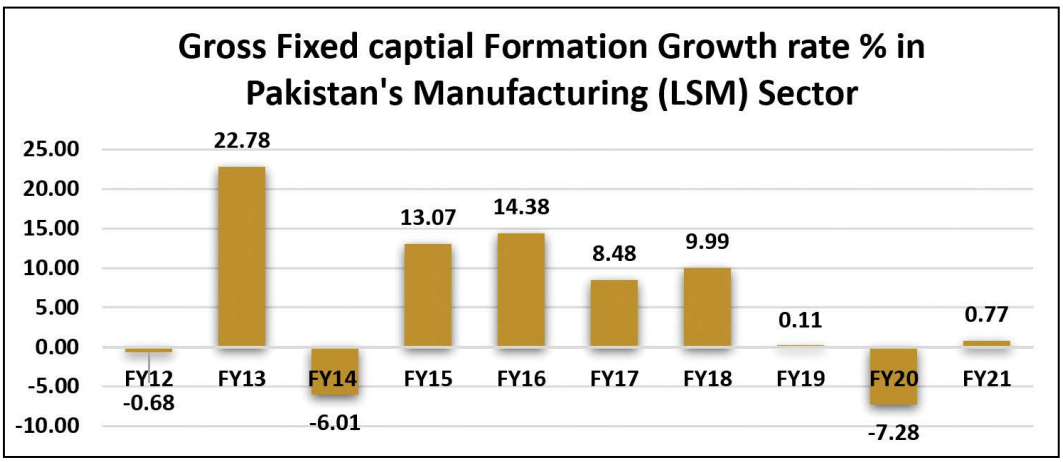
The smuggling issue underscores the urgent need for stringent border controls, effective law enforcement, and international collaboration to curb this illicit trade. Addressing smuggling activities is crucial for fostering a level playing field, encouraging fair trade practices, and ensuring the sustainability and growth of Pakistan's manufacturing sector.

7. Outdated infrastructure and weak supply chain

Pakistan's manufacturing sector grapples with formidable challenges arising from the lack of modern infrastructure facilities and a weak supply chain. Insufficient and unreliable energy supply, outdated transportation networks, and limited access to high-speed internet hinder the sector's productivity and global competitiveness. Energy shortages disrupt production processes, leading to downtime and increased operational costs. Inadequate transportation infrastructure, including congested ports and poor road conditions, results in delays and higher transportation expenses, impeding the smooth flow of goods. Limited internet penetration and slow connection speeds hinder the adoption of advanced technologies crucial for modern manufacturing practices. Additionally, inefficient logistics services, inadequate warehousing facilities, and poor coordination among supply chain entities create inventory management challenges, leading to increased costs and suboptimal operations. Cumbersome customs procedures and bureaucratic hurdles further complicate international trade, hindering the sector's ability to expand its market reach and growth.

8. Lack of Capital Investment and Expansion

Figure 2.6



Source: SBP

The fluctuation in Pakistan's manufacturing sector's Gross Fixed Capital Formation (GFCF) growth rate from FY12 to FY21 illustrates a volatile investment environment. Positive growth rates in FY13, FY15, FY16, FY17, and FY18 indicate periods of robust investment and economic expansion. However, the negative growth rates in FY12, FY14, FY20, and marginal growth in FY19 and FY21 highlight the sector's vulnerability to economic challenges. These fluctuations can have several negative impacts on the manufacturing sector. Uncertain investment climates have deterred both domestic and foreign investors, leading to reduced capital infusion and slowed industrial growth. This limitation has also discouraged the establishment of new manufacturing ventures and the expansion of existing ones, resulting in reduced job creation and stunted economic development. Furthermore, the shortage of capital has impeded research and development initiatives, hampering innovation and global competitiveness.

9. Lack of valued-added production

The recent data from the World Bank underscores a concerning trend in Pakistan's manufacturing sector: the lack of value-added production in its exports. Despite a marginal increase in the number of exported products over the past 16 years, Pakistan still faces a significant challenge in adding value to its exports. The comparison with neighboring countries like India and Bangladesh reveals a stark contrast. Pakistan's exports primarily consist of conventional products with limited value addition, leading to a less competitive position in the global market.

The export-to-import ratio of Pakistan indicates (the number of products exported relative to imported ones) stands at 0.67 during 2017-18. This figure highlights that Pakistan is importing 33% more products than it is exporting, reflecting a trade imbalance and a lack of diversification in its export portfolio. In contrast, India's ratio is above 1, indicating a surplus in exports, while Bangladesh, though below 1, shows a more favorable ratio compared to Pakistan.

10. Sector/Industry Specific Impediments

Textile Industry

a) Weak Government Policy Support:

- Instability and unpredictability in policies
- Exclusion of industry stakeholders
- Uncertain business environment

b) Cotton Production Challenges:

- Expensive and low-quality cotton
- Decline in cotton production due to more profitable crops
- Inadequate quality standards and untrained cotton pickers

c) Energy Problems:

- Uncompetitive tariff rates
- Frequent electricity and gas outages
- Power outages disrupting industry operations
- Low voltages damaging delicate equipment

d) Economic Factors:

- High inflation rate
- Currency fluctuations impacting costs and profits

e) Financial Uncertainties:

- Banks exploiting fluctuating dollar prices
- Varying rates for imports and exports
- Lack of regulation for private banks

Pharmaceutic industry

a) Absence of Favorable Policy Environment:

- Lack of government support and incentives hindering local manufacturers' competitiveness
- Absence of subsidies necessary for global competitiveness

b) Counterfeit Drugs:

- Approximately 30% of pharmaceuticals in Pakistan estimated to be counterfeit
- Poses serious public health risk and damages pharmaceutical companies' reputation

c) Pricing Control Legislation:

- Imbalance in pricing control leading to closures and relocations of pharmaceutical firms
- Need for a balanced pricing strategy ensuring fairness for both consumers and businesses

d) Lack of Investment in R&D:

- Insufficient funding for research and development limits new drug discovery and product expansion
- Government incentives for encouraging pharmaceutical companies to invest more in R&D initiatives

e) Skilled Workforce Shortage:

- Shortage of skilled workers in crucial areas such as R&D, quality control, and manufacturing
- Hinders industry growth and innovation capabilities

f) Intellectual Property Laws:

- Restrictive intellectual property laws discourage pharmaceutical innovation
- Reforms needed to encourage creativity and investment in the industry

g) Long-term Funding Constraints:

- Lack of stable long-term funding options impacting research, development, and innovation efforts
- Hinders industry's ability to plan and invest in future projects.

Cement Industry

a) High Taxes:
- Sales, income, and FED escalate production costs, limiting revenue and growth prospects.

b) Soaring Energy Prices:
- High fuel, electricity, and gas prices strain financial resources, and need careful financial management.

c) Shortage of Raw Materials:
- Scarcity of essential raw materials (limestone, gypsum, clay) within Pakistan forces costly imports, impacting cost structures.

d) Intense Domestic Competition:
- Fierce competition leads to price reductions, impairing profitability of cement companies.

e) Complex Regulatory Landscape:
- Navigating environmental rules, labor standards, and tax requirements complicates the operating environment.

f) Limited Access to Technology:
- Limited access to cutting-edge technology hampers efficiency improvements and cost reductions.

g) Challenges in Export:
- Foreign trade barriers, expensive transportation costs, and competition from other nations hinder cement exports.

h) Security Concerns:
- Companies in remote or unstable regions face security issues, straining supply chains and increasing operational costs.

Automotive Industry

a) Inadequate Infrastructure:
- Poorly maintained roads, highways, and bridges escalate transportation expenses, limiting industry expansion.

b) High Production Costs:
- Imported raw materials, energy, and taxes contribute to high production costs, putting local manufacturers at a disadvantage.

c) Low Localization:
- Reliance on imported components raises production costs and reduces competitiveness on the global stage.

d) Shortage of Skilled Manpower:

- Lack of skilled workers hampers the industry's efficiency, hindering expansion and maintenance of equipment.

e) Political Instability:

- Political uncertainty creates an uncertain investment climate, deterring potential investors and hindering growth.

f) Influx of Imported Vehicles:

- Imported vehicles offer more options to consumers but impact the market for locally manufactured cars, affecting sales and revenue of domestic industry.

Fertilizer Industry

a) Scarcity of Natural Gas:

- Limited availability of natural gas disrupts production processes and leads to high energy expenses due to reliance on expensive fuels like furnace oil and diesel.

b) Heavy Reliance on Subsidies:

- Excessive subsidies strain the country's economic resources, creating inefficiencies and financial burdens in the long run.

c) Lack of Investments:

- Insufficient investments hinder the modernization of production facilities and adoption of advanced technologies, impacting industry efficiency and competitiveness.

Chapter Summary

The manufacturing industry in Pakistan encounters numerous hurdles that collectively impede its growth and competitive standing. Challenges such as power and gas crises, manifested through electricity shortages and escalating gas expenses, disrupt industrial operations and inflate production costs. Economic downturn, including high interest rates, inflation, and currency depreciation, amplifies financial strains on businesses, influencing investment decisions and overall profitability. Additionally, low-capacity utilization due to insufficient demand, complex tax structures, and cumbersome regulatory compliance further restricts the sector.

Market competition with smuggled goods exacerbates these challenges by distorting fair competition and causing revenue losses for the government. Furthermore, inadequate modern infrastructure, fragile supply chains, and limited capital investment hinder the industry's productivity and global competitiveness. The absence of value-added production in exports underscores the necessity for diversification and innovation to bolster Pakistan's global market presence.

To tackle these issues and foster the growth of Pakistan's manufacturing sector, a comprehensive, cooperative approach involving the government, private sector, and international stakeholders is essential.

CHAPTER 03

ICMA Proposal to align diversified definitions of Business Size in Pakistan

Chapter 3

ICMA Proposal to align diversified definitions of Business Size in Pakistan

The absence of a uniform and standard definition for business or firm size in Pakistan among key institutions such as Pakistan Bureau of Statistics (PBS), State Bank of Pakistan (SBP), Small and Medium Enterprises Development Authority (SMEDA), Securities and Exchange Commission of Pakistan (SECP), and the World Bank (WB), poses significant challenges. This inconsistency in defining business size has also led to confusion and hinder thorough analysis and planning. ICMA, recognizing this issue, aims to propose a cohesive framework for measuring business size for the consideration of policymakers. By fostering uniformity in this data, ICMA intends to facilitate better-informed decisions and policies for the country's business landscape, ensuring a clearer understanding of its economic environment.

ICMA has identified that the absence of a standardized definition for firm size in Pakistan, as depicted in Tables 3.1 and 3.2, presents multiple challenges. Table 3.1 outlines various definitions of firm size based on criteria such as the number of employees, annual turnover, and total assets or capital, as defined by different institutions in Pakistan. In order to enhance data comprehension, ICMA has unified and converted all country-specific data into US Dollars. The noticeable disparities in definitions among institutions, including the PBS, SBP, SMEDA, SECP, and WB, are significant.

Business Size Definitions by different Institutions

(Unified into USD by ICMA)

Table 3.1

Measures of Firm Size	PBS	SBP	SMEDA	SECP	World Bank
By Number of Employees					
Micro	---	---	---		1 to 9
Small	1 to 9	Upto 50	---	Upto 50	10 to 49
Medium	--	51 to 250	---	51 to 250	50 to 300
Large	> 10	>250	---	> 250	> 300
By Annual Turnover (Million $)					
Micro	---	---	---	---	Less than $0.1m
Small	---	< $0.525m	< $0.525m	< $0.525m	$0.1m to $3m
Medium	---	$0.525m to $2.8m	$0.525 to $2.8m	$0.525m to $2.8m	$3m to $15m
Large	---	>$2.8m	>$2.8m	>$2.8m	> $15m
By Total Asset or Capital (Million $)					
Micro	---	---	---	---	less than $0.1m
Small	---	---	---	---	$0.1m to $3m
Medium	---	---	---	---	$3m to $15m
Large	---	---	---	---	> $15m

Source: SBP, PBS, SMEDA, SECP and IFC; complied and unified into USD by ICMA (Exchange rate: $1= 285.92 PKR on 30-Nov-2023)

Discrepancies in the Definition Criteria

There exists notable diversity in defining firm sizes among institutions within Pakistan and across neighboring countries like India, China, and Bangladesh. In Pakistan specifically, various entities such as PBS, SBP, SMEDA, and SECP employ different criteria, including the number of employees, annual turnover, and total assets or capital, to classify firms. For instance, PBS defines firm size based on the number of employees, ranging from 1 to 9 for small firms and more than 10 for large firms, whereas SBP and SECP utilize distinct criteria. This disparity highlights the necessity for a unified definition within Pakistan. Meanwhile, in India, China, and Bangladesh, the employee count remains a significant factor, yet the thresholds differ significantly among these nations (See Table 3.2). In Pakistan, the classification of firms also incorporates annual turnover and total assets or capital, with varying thresholds across institutions. Similarly, India, China, and Bangladesh follow comparable patterns but exhibit differing thresholds for turnover and total assets or capital.

Business Size Definitions in India, Bangladesh and China

(Unified into USD by ICMA)

Table 3.2

Measures of Firm Size	India	China	Bangladesh
By No. of Employees			
Micro	< 10	< 20	16 to 30
Small	10 to 50	< 300	31 to 120
Medium	51 to 300	300 to 2000	121 to 300
Large	>300	> 2000	> 300
By Annual Turn over			
Micro	< $0.60 m	----	-
Small	< $0.60 m to <$5.997 m	<$4.24m	-
Medium	$5.997 m to < $29.986m	$4.24m to <$42.34m	-
Large	>$29.986m	>$42.34m	-
By Total Asset or Capital			
Micro	< $0.12m	---	$0.0091m to < $0.068m
Small	$0.12 m to < $1.20 m	<$5.634m	$0.068m to <$1.358m
Medium	$1.2m to < $5.998 m	$5.634m to <$56.338m	$1.358m to <$4.522m
Large	> $5.998 m	>$56.338m	> $4.522m

Source: India: (Ministry of MSME India and IFC), China: (ERIA and SME promotion law China), Bangladesh: (National Industrial policy Bangladesh). Complied and unified into USD by ICMA. (Exchange rates: $1 = 83.35 INR, $ 1 = CNY 7.10 and $1 = 110.42 BDT on 30-Nov-2023).

Need for Alignment with World Bank Criteria

The above cross-country comparisons reveal significant disparities in the thresholds for defining small, medium, and large firms. Harmonizing criteria across countries in the region could facilitate more accurate international benchmarking and analysis. The government should play a role in advocating for a standardized and internationally aligned definition of firm sizes, emphasizing the importance of unified criteria firm data across every institution in the economy which create a collaboration among institutions for a more cohesive and globally comparable business landscape.

ICMA Proposed Definition of Large-Scale Manufacturing Firm

ICMA maintains that the World Bank sets a globally recognized standard for defining firm sizes, which is vital for institutions in Pakistan to adopt in order to ensure consistency and comparability. Aligning with the World Bank's criteria facilitates cross-border business activities, investments, and data analysis.

ICMA proposes a harmonized definition of firm sizes across Pakistani institutions that closely aligns with the World Bank's standards. Encouraging collaboration among relevant authorities aims to establish a unified approach, ensuring consistency and comparability in business data. Emphasizing the inclusion of micro firm data in future reports is crucial for a holistic understanding of the entire business landscape.

The proposed definition of Large-Scale Manufacturing (LSM) firms by ICMA presents a comprehensive economic framework in Table 3.3. Each criterion reflects a better understanding of a firm's economic role and impact. Quantitative metrics, such as a minimum of 300 employees, an annual turnover exceeding $12 million, and total assets or capital greater than $5 million, highlight operational scale. Resource utilization guidelines strive to balance domestic and imported resources, supporting local industries and aiming for economic self-sufficiency. Market presence requirements, like listing on the Pakistan Stock Exchange (PSX) and regional distribution, align with economic principles, promoting market visibility, investor confidence, and regional economic development.

ICMA Proposed Definition of LSM Firms

Table 3.3

Criteria of LSM Firm Size	LSM Firm Size Measure	Rationale for the Criteria
By No. of Employee	> 300	Similar criteria found in WB, China, India and Bangladesh
By Annual Turn over	> $12m	WB, China and India all have relatively higher criteria.
By Total Asset or Capital	> $5m	Similar criteria found in WB, India and Bangladesh.
Use of domestic resources to produce output	At least 60%	This will increase employment, build supply chain resilience and improve trade balance.
Use of imported resources to produce output	less than or equal to 40%	This will curtail dependency on foreign loans, promote local industry and reduce trade deficit.
Listing on Stock Exchange	Pakistan Stock exchange	Increase investors' confidence and investment.
Production facility across Pakistan	At least one unit in every region	This will reduce regional disparity and promote economic interdependence.
Mandatory R&D Department/ In-House Innovation Center	At least One Department	This will help in identifying comparative advantage and in making Data-Driven Decisions.
Provide Paid internship and Apprenticeship	Al least 3% to 4% of its total employees	This will increase workforce development and long-term labour supply.
Renewable Energy (R.E) Consumption and Environmental sustainability	R.E consumption should be 25% to 30% of total energy consumption with an increasing share of 2% very 3 years.	This will lead to long-term cost stability; access to green consumer markets; energy independence and improved Air Quality and water conservation.

Furthermore, provisions for Research and Development (R&D) departments, internships, and apprenticeships reflect an economic understanding of the importance of innovation and human capital development in driving productivity and sustaining long-term economic growth. Criteria related to renewable energy consumption and environmental impact demonstrate a commitment to sustainability, aligning with global economic trends emphasizing corporate responsibility. Overall, ICMA's proposal is economically grounded, considering not only the quantitative scale but also the broader economic impact, market dynamics, innovation, and sustainability in shaping the definition of LSM firms in Pakistan.

Chapter Summary

This chapter underscores the critical need for a unified and consistent definition of firm size in Pakistan, a viewpoint strongly advocated by the ICMA. The disparities depicted in Tables 3.1 and 3.2, showcasing varied size classifications across different institutions, highlight the urgency for standardization. ICMA's recommendation for harmonizing firm size definitions aims to tackle challenges related to inconsistent support programs, uncertain access to finance, and difficulties in policy implementation.

Comparing these definitions with country-specific criteria in India, China, and Bangladesh accentuates the complexities in conducting international business assessments, urging the adoption of a standardized approach. Furthermore, ICMA's proposed definition of Large-Scale Manufacturing (LSM) firms, detailed in Table 3.3, presents a comprehensive economic framework. It doesn't solely focus on quantitative metrics but also emphasizes resource utilization, market presence, innovation, and sustainability.

ICMA's initiative seeks to cultivate a conducive business environment in Pakistan, fostering economic growth, ensuring financial stability, and promoting ethical management practices. Overall, ICMA's call for definition harmonization represents a crucial step toward improving the economic landscape and encouraging sustainable business practices in Pakistan.

CHAPTER 04

ICMA's Proposed New Industrial Policy Goals for Economic Revival

Chapter 4

ICMA's Proposed New Industrial Policy Goals for Economic Revival

This chapter outlines ICMA's proposed objectives or goals for a new industrial policy in Pakistan. These goals aim to strengthen industries, promote sustainable energy, revitalize exports, and attract vital investments. They represent a strategic roadmap towards a more resilient and prosperous economic landscape for Pakistan's sustained growth and global competitiveness. The broad objectives are:

- Elevating Large-Scale Manufacturing (LSM) growth to 20% within a decade
- Increasing industrial sector employment from 25% to 35% in the next decade.
- Doubling manufacturing exports within 10 years and restoring a 99% share in 3 years.
- Attracting investments to foster growth in the LSM sector.
- Increasing renewable energy capacity to 25%, reducing reliance on non-renewable sources.

Goal 1: Elevating LSM growth from an average 8% to 20% within a decade

ICMA underscores the need for aligning objectives with global best practices to enhance Pakistan's economic status. To achieve this, we propose boosting the annual growth rate of Pakistan's manufacturing sector from the current 8% average to a targeted 20% over the next decade. This initiative aims to emulate the success observed in countries like China, which boasts an impressive 8.31% average manufacturing growth rate and a robust 8.23% GDP growth rate. Acknowledging the pivotal role of a thriving manufacturing sector in fostering economic prosperity, our focus centers on positioning Pakistan's manufacturing sector as a vital driver for consistent and accelerated economic progress.

Analyzing the data in Table 4.1, it is evident that the manufacturing landscape plays a crucial role in the economic development of various countries. Notably, Pakistan, with an average manufacturing growth rate of 5.32% and an average GDP growth rate of 4.15% from 2000 to 2022, signifies a positive correlation between manufacturing and overall economic progress. Comparatively, China stands out with the highest average manufacturing growth rate of 8.31%, coupled with a robust average GDP growth rate of 8.23%. India, Bangladesh, and Vietnam also exhibit noteworthy manufacturing and GDP growth rates, emphasizing the importance of a strong industrial base.

Manufacturing Growth Rate and GDP Growth Rate (2000-2022)

Table 4.1

Country	Average Manufacturing Growth (%)	Average GDP Growth Rate (%)
Pakistan	5.32	4.15
India	6.1	6.25
China	8.31	8.23
Bangladesh	6.99	6.26
Malaysia	3.87	5.2
Vietnam	7.54	6.5

Source: World Bank, Analysis by ICMA

With a clear positive link between manufacturing and GDP growth rates evident in these nations, it becomes imperative for Pakistan to bolster its large manufacturing sector's contribution to the GDP. This strategic pivot has the potential to stimulate greater production, generate employment opportunities, and attract increased investment, thereby cultivating a more resilient and vibrant economic landscape akin to the successful paths witnessed in similar countries.

Correlation Coefficient between "Manufacturing output and GDP"

Table 4.1.1

Correlation Coefficient =R	R- Value	Results Interpretation
Pakistan	0.79	Strong Positive Relationship
India	0.48	Moderate Positive Relationship
China	0.83	Strong Positive Relationship
Bangladesh	0.90	Strong Positive Relationship
Malaysia	0.78	Strong Positive Relationship
Vietnam	0.24	Positive Relationship
Interpretation of Range	-1 ≤ 0 ≤+1	(-) Negative sign shows Inverse relationship between "Renewable Energy Demand and Manufacturing Output". + Positive sign shows Direct relationship between these two variables. "0" Zero means no relationship between variables.

Source: World Bank, Analysis by ICMA

The correlation coefficients presented in Table 4.1.1 reveal the relationships between Manufacturing Output Growth Rate and GDP Growth Rate for various countries. Pakistan demonstrates a strong positive relationship with a correlation coefficient of 0.79, indicating a significant connection between the growth rates of manufacturing output and overall GDP. India exhibits a moderate positive relationship (0.48), while China, Bangladesh, and Malaysia showcase strong positive relationships with correlation coefficients of 0.83, 0.90, and 0.78, respectively. These findings imply that as the manufacturing sector grows, the GDP of these countries tends to follow suit, suggesting the crucial role of industrial production in contributing to overall economic expansion. Interestingly, Vietnam shows a positive relationship (0.24), albeit with a lower correlation coefficient, suggesting a less pronounced but still discernible connection between manufacturing and GDP growth. The interpretation of these correlation coefficients underscores the importance of fostering a robust manufacturing sector to drive economic growth, as evidenced by the positive associations observed across diverse economies.

Benefits:

1. **Stimulating Economic Growth:** A strategic expansion of Pakistan's LSM sector presents a significant avenue for stimulating economic growth. The consistent positive growth in Manufacturing sector can directly contributes to overall GDP, fostering a conducive economic environment. This trajectory resonates with the experiences of economic powerhouses like China, where a vibrant manufacturing sector played a pivotal role in propelling robust economic expansion.

2. **Attracting Domestic and Foreign Investments:** The expansion of the LSM sector is poised to attract both domestic and foreign investments. Investors inherently gravitate towards sectors that wield a substantial share in the GDP. This inflow of investments not only promises higher returns for investors but also assumes a critical role in the holistic economic development of the nation. Successful instances from countries like Vietnam, strategically luring foreign investments into their manufacturing sector, underscore the potential benefits of this approach.

3. **Diversifying Export Capabilities:** The growth of Pakistan's LSM sector unlocks opportunities for diversifying export capabilities. Drawing inspiration from the success stories of India, Pakistan can strategically diversify its manufacturing portfolio to encompass a spectrum of products such as pharmaceuticals, textiles, and technology. This diversification contributes to a more resilient and adaptable export base, mitigating dependence on specific markets.

4. **Ensuring Inclusive Economic Growth:** Prioritizing the growth of Pakistan's LSM sector ensures inclusive economic development by generating job opportunities and fostering economic activities across diverse segments of the population. This model aligns with the success witnessed in Mexico's automotive sector, where inclusive economic development resulted from substantial job creation and improved living standards.

Goal 1 Summary

The proposed objective of enhancing the Large-Scale Manufacturing (LSM) sector's annual growth rate from an average of 8% to a targeted 20% over the next decade aligns with global best practices and holds the potential to elevate Pakistan's economic standing. Drawing inspiration from successful models like China, where a thriving manufacturing sector correlates strongly with robust GDP growth, the strategic initiative aims to position Pakistan's LSM sector as a key driver of sustained and accelerated economic development. The analysis of global manufacturing and GDP growth rates in Table 4.1, coupled with correlation coefficients in Table 4.1.1, underscores the positive relationship between a flourishing manufacturing sector and overall economic progress. This correlation is evident not only in Pakistan but also in countries like China, Bangladesh, and Malaysia, where strong positive relationships between manufacturing output and GDP growth are observed. The proposed objective carries significant benefits, including stimulating economic growth, attracting diverse investments, diversifying export capabilities, and ensuring inclusive economic development. By strategically implementing this objective, Pakistan can potentially replicate the successes witnessed in countries such as China and India, fostering a resilient, dynamic, and inclusive economic environment.

Goal 2: Increasing industrial sector employment from 25% to 35% in the next decade

ICMA is dedicated to advancing a strategic objective: boosting employment within the industrial sector, specifically targeting the Large-Scale Manufacturing (LSM) sector. The goal is to elevate the current employment rate of 25% to a more robust 35% over the next decade. This initiative aims to emulate China's success, creating more manufacturing jobs while concurrently reducing overall unemployment. By aligning with this vision, we aspire to strengthen Pakistan's economic condition, fostering a more inclusive and prosperous future.

Analyzing Table 4.3 data reveals a correlation between employment rates in the manufacturing sector and overall unemployment rates among select countries. China stands out as a successful model, with an average manufacturing employment rate of 28.28% and a moderate average unemployment rate of 5.39%. This demonstrates a balanced approach to industrial employment and overall unemployment management.

Employment rate in Manufacturing sector and Total Unemployment rate of the economy

Table 4.3

Country	Average Employment Rate (Manufacturing Sector)	Average Total Unemployment Rate
Pakistan	23.46	3.36
China	28.28	5.39
Bangladesh	18.93	1.84
India	22.16	7.84
Vietnam	20.79	1.91

Source: World Bank, Analysis by ICMA.

The analysis presented above strongly advocates for prioritizing the large-scale manufacturing sector to enhance Pakistan's economic performance. Implementing policies that promote manufacturing growth, drive technological innovation, and support skills development within this sector can significantly contribute to higher employment rates, leading to a subsequent reduction in overall unemployment. By concentrating on the expansion and modernization of the manufacturing industry, Pakistan has the opportunity to build a resilient job market, fostering economic stability and prosperity.

Benefits:

1. **Multiplier Effect on Job Creation:** The observed data from 2002 to 2022 in Pakistan's labor market underscores the dynamic relationship between unemployment rates and the employment share in the industrial sector, particularly in Large-Scale Manufacturing (LSM). This empirical correlation accentuates the pronounced impact of LSM expansion on job creation, with a discernible multiplier effect that spans various skill levels. This economic model, akin to the successful German experience, illuminates how LSM growth catalyzes a diverse spectrum of employment opportunities, thereby contributing significantly to overall economic stability.

2. **Spillover Effects Across Industries:** Beyond the direct creation of employment within LSM facilities, the sector engenders additional job opportunities in interconnected industries such as logistics, transportation, and supply chain management. The intricacies of these related industries thrive symbiotically with the burgeoning manufacturing sector. Drawing parallels with the USA, where a robust manufacturing sector has historically fostered a ripple effect, Pakistan can anticipate similar outcomes. This macroeconomic perspective emphasizes that bolstering the LSM sector not only amplifies job opportunities within its confines but also stimulates job creation in associated sectors, reinforcing economic growth.

3. **Strategic Emphasis on Skill Development:** The trajectory of employment in Pakistan's LSM sector, as revealed by the data, underscores the imperative for concurrent investment in skill development initiatives. By strategically channeling resources into training programs and educational initiatives, Pakistan can elevate its human capital. This focus on skill enhancement aligns with the broader goal of nurturing a proficient workforce capable of meeting the evolving demands of a growing and technologically advancing manufacturing sector. Notably, Singapore's commitment to human capital development within its manufacturing sector stands as a compelling example.

4. **Addressing Unemployment Challenges and Harnessing Demographic Dividend:** The observed concerted effort to increase employment in the LSM sector directly addresses the persistent challenge of unemployment, particularly among the youth demographic in Pakistan. By providing substantial and meaningful employment opportunities, the country can effectively harness its demographic dividend. The historical transformation of South Korea from a labor-intensive economy to a high-tech manufacturing hub serves as an illustrative precedent, showcasing the potential for sustained economic growth through targeted employment strategies.

In summary, the empirical insights derived from Pakistan's labor market data strengthen the economic justification for increasing employment rates within the Large-Scale Manufacturing sector. The evident advantages extend beyond immediate job creation, laying the foundation for sustained economic progress and positioning Pakistan as a dynamic player in the global economic landscape.

Correlation between Industry sector Employment rate and Total Unemployment rate

Table 4.3.1

(Correlation Coefficient = R)	R- Value	Results Interpretation
PAKISTAN	-0.012	Negative relationship
INDIA	-0.25	Negative relationship
VIETNAM	-0.24	Negative relationship
CHINA	-0.21	Negative relationship
Interpretation of Range	-1 ≤ 0 ≤+1	• (-) Negative sign shows Inverse relationship between "Renewable Energy Demand and Manufacturing Output". • + Positive sign shows Direct relationship between these two variables. • "0" Zero means no relationship between variables.

Source: World Bank, Analysis by ICMA.

The correlation coefficients (R-values) presented in Table 4.3.1, illustrating the relationship between Industry Sector Employment Rate and Total Unemployment Rate in various countries, consistently demonstrate negative associations. In the case of Pakistan, the correlation coefficient is -0.012, indicating a negligible negative relationship between industry sector employment and total unemployment. Similarly, India, Vietnam, and China exhibit negative correlations of -0.25, -0.24, and -0.21, respectively, suggesting a modest inverse relationship between employment in the industry sector and overall unemployment in these nations. The interpretation range of -1 to 1 signifies that these negative correlations reflect an inverse association: as industry sector employment rates fluctuate, there tends to be a corresponding decrease in total unemployment rates. This emphasizes the significance of comprehending the dynamics between industry-specific employment and overall unemployment for crafting effective labor market policies.

Goal 2 Summary

ICMA advocates boosting industrial sector employment, targeting a rise from 25% to 35% in the Large-Scale Manufacturing sector over a decade. Inspired by successful models like China, the initiative aims to balance increased manufacturing jobs with lowered overall unemployment. Correlations in Table 4.3 highlight the link between manufacturing employment and overall unemployment, reinforcing the need to prioritize the sector for Pakistan's economic growth. Beyond immediate job creation, the initiative promises multiplier effects, skill development, and addressing unemployment challenges, aligning with global best practices and positioning Pakistan as an active player in the world economy. Focusing on expanding and modernizing manufacturing holds the potential to create a resilient job market, ensuring economic stability and fostering prosperity.

Goal 3: Doubling manufacturing exports within 10 years

Based on the insights from Table 4.2, ICMA proposes a long-term objective of doubling manufacturing sector exports and restoring Pakistan's industrial exports from the current 79% to the previous level of 99% within three years. This initiative seeks to elevate the significance of manufacturing in the export portfolio, thereby strengthening the overall resilience and competitiveness of Pakistan's export sector. By prioritizing this strategic move, the aim is to establish the Large-Scale Manufacturing (LSM) sector as a pivotal driver of economic growth and global competitiveness.

Table 4.2

Source: SBP, Analysis by ICMA.

Upon reviewing the data in Table 4.4, it becomes apparent that the average percentages of manufacturing exports (as a share of merchandise exports) and total exports (as a percentage of GDP) are key metrics for assessing a country's economic performance. Countries like China, Bangladesh, and Malaysia, which feature higher average percentages of manufacturing exports, consistently demonstrate more robust total export figures relative to their GDP.

Average Manufacturing Exports and Total exports (Merchandise) of the Economy (2007-2023)

Table 4.4

Country	Average Manufacturing Exports (% of Merchandise Exports)	Average Total Exports (% of GDP)
Pakistan	75.11	12.98
India	70.49	17.02
China	91.73	28.22
Bangladesh	92.80	15.52
Malaysia	68.65	89.17
Vietnam	65.07	69.42

Source: World Bank, Analysis by ICMA.

For Pakistan, with an average manufacturing exports (% of Merchandise Exports) is 75.11% and total exports constituting 12.98% of GDP, there is a potential opportunity to enhance economic performance by further investing in and promoting manufacturing exports. Increasing the focus on manufacturing, particularly through policies that support export-oriented industries, can contribute to a more diversified and resilient export portfolio for Pakistan, ultimately fostering economic growth and stability. This aligns with global trends where successful economies have strategically boosted their manufacturing exports to drive overall export-led development.

Correlation between Manufacturing Exports and Total Exports (Merchandise) of an Economy

Table 4.4.1

(Correlation Coefficient = R)	R-value	Results Interpretation
Pakistan	0.45	Moderate Positive relationship
Bangladesh	0.31	Low Positive relationship
Malaysia	0.52	Moderate Positive relationship
Vietnam	0.83	Strong Positive relationship
Interpretation of Range	-1 ≤ 0 ≤+1	• (-) Negative sign shows Inverse relationship between "Renewable Energy Demand and Manufacturing Output". • + Positive sign shows Direct relationship between these two variables. • "0" Zero means no relationship between variables.

Source: World Bank, Analysis by ICMA.

The correlation coefficients (R-values) between Manufacturing Exports and Overall Exports for different countries provide insights into the relationships between these variables. In the context of Pakistan, the moderate positive relationship (R = 0.45) suggests that as Manufacturing Exports increase, there is a corresponding moderate increase in Overall Exports. This indicates a certain level of dependence on the manufacturing sector for the country's total export performance. Similarly, Bangladesh demonstrates a low positive relationship (R = 0.31), implying a less pronounced but still positive association between Manufacturing Exports and Overall Exports. In Malaysia, the moderate positive relationship (R = 0.52) indicates that changes in Manufacturing Exports are moderately reflected in the overall export dynamics. Conversely, Vietnam exhibits a strong positive relationship (R = 0.83), suggesting a highly correlated pattern where fluctuations in Manufacturing Exports are strongly mirrored in the overall export figures. In the interpretation range of -1 to +1, these positive correlations signify a direct relationship between Manufacturing Exports and Overall Exports, emphasizing the significance of the manufacturing sector in influencing a country's overall export performance.

Benefits:

1. **Market Diversification for Economic Resilience:** Promoting the expansion of exports via the LSM sector offers a strategic avenue for diversifying markets. Pakistan stands to reduce its reliance on a limited number of trading partners, a crucial aspect for enhancing economic resilience. Drawing inspiration from the success of South Korea in strategically diversifying its export destinations, Pakistan can strategically target multiple markets for LSM products, fostering sustained growth and market stability.

2. **Reducing Dependency on a Few Trading Partners:** Examining the correlation between Manufactures exports and Exports of goods and services of Pakistan, reveals a positive relationship. This implies that as the LSM sector's exports increase, there is a potential to reduce dependency, similar to the strategies employed by India. A diversified export portfolio is essential for navigating global economic fluctuations.

3. **Contributing to Positive Trade Balance and Economic Stability:** The data indicates a gradual increase in Exports of Pakistan, emphasizing the importance of a positive trade balance. Strengthening the LSM sector's exports can further contribute to this positive balance, aligning with the economic stability achieved by China through export-oriented policies.

4. **Enhancement of Global Competitiveness through Quality Exports:** Despite challenges, Pakistan's LSM sector can enhance global competitiveness by focusing on high-quality products. Learning from China's success in maintaining a competitive edge in manufacturing, Pakistan can strategically position itself as a reliable source of quality goods in the international market.

5. **Strengthening Economic Diplomacy through Export Expansion:** The positive correlation between Manufactures exports and overall Exports in Pakistan suggests that strengthening economic diplomacy, as seen in Bangladesh, is beneficial. Collaborative efforts with international partners can create opportunities for trade agreements, expanding market access for Pakistani products.

Goal 3 Summary

ICMA proposes a strategic plan for Pakistan, aiming to double manufacturing exports in a decade and increase the share of Large-Scale Manufacturing (LSM) sector exports from 79% to 99% in three years. The proposal is based on an analysis showing the pivotal role of manufacturing exports in a country's economic performance, with examples from China, Bangladesh, and Malaysia demonstrating a positive correlation between higher manufacturing export percentages and stronger total export figures. The initiative aims to achieve market diversification, reduce reliance on a few trading partners, and enhance economic resilience. Strengthening the LSM sector's exports is expected to reduce dependency, promote a positive trade balance, and boost global competitiveness through high-quality exports. The proposal aligns with successful export-oriented policies in countries like Bangladesh, emphasizing economic diplomacy and trade agreements. Correlation coefficients highlight the manufacturing sector's importance in overall export performance, positioning Pakistan's LSM sector as a key driver of economic growth and global competitiveness. The increased focus on manufacturing exports is viewed as a strategy to enhance economic resilience, diversify the export portfolio, and foster overall economic stability and prosperity.

Goal 4: Attracting investments to foster growth in the LSM sector

The analysis in Table 4.5 highlights crucial insights into Pakistan's Large-Scale Manufacturing (LSM) sector. Notably, consistently negative growth rates in Foreign Direct Investment (FDI) for LSM, especially in 2011, 2016, 2018, 2019, and 2020, emphasize the need for urgent actions to attract foreign investors. ICMA strongly recommends strategic measures, including improving the investment climate, simplifying regulations, and offering incentives to make the sector more appealing to international investors. Additionally, the analysis reveals mixed trends in Gross Fixed Capital Formation (GFCF) within the Manufacturing (LSM) sector, representing domestic investment. While positive in some years, it is negative in others. This indicates the importance of understanding the dynamics of domestic investment in shaping the sector's performance. Both foreign and domestic investment play pivotal roles in influencing output growth in the manufacturing sector and hence, the policymakers may have to adopt a balanced approach to foster a robust and sustainable manufacturing sector.

LSM Sector FDI, LSM Output Gross Fixed Capital Formation growth rate of Pakistan

Table 4.5 (2011-2020)

Year	LSM FDI growth rate	LSM output growth rate	Gross Fixed capital Formation in Manufacturing (LSM) Sector Growth rate
2011	-68.07	0.85	-0.68
2012	43.52	4.81	22.78
2013	208.65	5.42	-6.01
2014	-52.21	3.32	13.07
2015	97.86	3.12	14.38
2016	-83.87	4.09	8.48
2017	838.09	6.92	9.99
2018	-61.99	3.53	0.11
2019	-32.75	-11.23	-7.28
2020	-34.71	11.50	0.77

Source: SBP and PBS, Analysis by ICMA.

The correlation analysis presented in Table 4.5.1 provides insights into the connections among LSM FDI net inflows, LSM output, and Gross Fixed Capital Formation (GFCF) in the LSM sector. The correlation coefficient of 0.26 between LSM FDI Growth Rate and LSM Output Growth Rate indicates a relatively weak positive correlation. This suggests that, on average, an increase in foreign direct investment in the Large-Scale Manufacturing (LSM) sector is associated with a slight uptick in output growth. Similarly, the correlation coefficient of 0.35 between GFCF Growth Rate of the LSM Sector and LSM Output Growth Rate signifies a moderately positive correlation.

Correlation between LSM FDI Net Inflows, LSM Output and Gross Fixed Capital Formation in LSM sector

Table 4.5.1

BETWEEN	CORRELATION COEFFICIENT= R
LSM FDI GROWTH RATE and LSM OUTPUT GROWTH RATE	0.26
GFCF Growth rate of LSM Sector and LSM Output growth rate	0.35
Interpretation of Range	• (-) Negative sign shows Inverse relationship between "Renewable Energy Demand and Manufacturing Output". • + Positive sign shows Direct relationship between these two variables. • "0" Zero means no relationship between variables.

Source: SBP and PBS, Analysis by ICMA.

In summary, the findings suggest a positive link between domestic investment, as indicated by GFCF, and the growth in manufacturing output. The interpretation range of the correlation coefficients underscores the existence of these relationships. However, it is crucial for policymakers and stakeholders to adopt a comprehensive approach that recognizes the intricate dynamics of both foreign and domestic investment to nurture a more resilient and robust Large-Scale Manufacturing (LSM) sector.

Benefits:

1. **Economic Growth and Employment Generation:** Attracting FDI in the large manufacturing sector can stimulate economic growth by injecting capital, technology, and expertise. This influx can lead to the establishment of new manufacturing facilities, driving output expansion and contributing to the overall GDP. Simultaneously, increased manufacturing activities generate employment opportunities, addressing one of Pakistan's crucial socio-economic challenges.

2. **Technology Transfer and Innovation:** FDI often brings advanced technologies and managerial practices to the host country. In the context of the large manufacturing sector, this can lead to technology transfer and innovation, enhancing the sector's efficiency and competitiveness. Pakistan can learn from the experiences of South Korea, which strategically attracted FDI to upgrade its technological capabilities in the manufacturing domain.

3. **Supply Chain Development:** FDI in the large manufacturing sector can catalyze the development of a robust supply chain. International investors often integrate local suppliers into their global value chains, providing opportunities for local businesses to grow. Examining the success of Mexico, which attracted FDI in its automotive sector, Pakistan can foster supply chain linkages for the benefit of its large manufacturing enterprises.

4. **Export Expansion and Trade Balancing:** FDI inflows in the large manufacturing sector can boost export-oriented production. This, in turn, contributes to expanding Pakistan's export base and achieving a more favorable balance of trade. By studying the experiences of Malaysia and Singapore, which leveraged FDI for export-oriented industrialization, Pakistan can chart a course for enhanced global market access.

5. **Infrastructure Development:** FDI often entails investments in infrastructure development, including transportation, energy, and logistics. This can address key bottlenecks in Pakistan's manufacturing sector, such as inadequate transportation networks and energy shortages. Learning from India's experience in attracting FDI for infrastructure projects, Pakistan can enhance the overall competitiveness of its large manufacturing sector.

6. **Economic Diversification and Resilience:** Attracting FDI in the large manufacturing sector contributes to economic diversification. A diversified economy is more resilient to external shocks and economic downturns. By adopting strategies similar to those of Brazil, which attracted FDI in diverse manufacturing sub-sectors, Pakistan can build a more resilient and dynamic economic base.

Goal 4 Summary

The analysis presented in Table 4.5 underscores the urgency for strategic efforts to attract foreign direct investment (FDI) in Pakistan's Large-Scale Manufacturing (LSM) sector. The consistently negative growth rates in LSM FDI, particularly in specific years, indicate the need for concerted action to reverse this trend. ICMA recommends implementing measures to improve the investment climate, streamline regulations, and offer incentives to enhance the sector's appeal to international investors.

The correlation analysis in Table 4.5.1 reveals a positive but relatively weak correlation between LSM FDI growth rate and LSM output growth rate, suggesting that an increase in foreign direct investment is associated with a slight uptick in output growth. Similarly, there is a moderately positive correlation between the Gross Fixed Capital Formation (GFCF) growth rate of the LSM sector and LSM output growth rate. These findings emphasize the importance of considering both foreign and domestic investment dynamics for fostering a resilient and robust LSM sector.

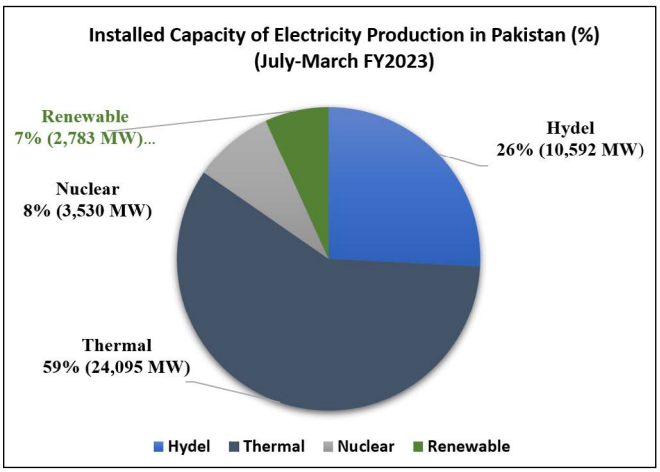
The benefits of attracting twin investments in the LSM sector are far-reaching. Firstly, it can stimulate economic growth and address unemployment challenges by injecting capital, technology, and expertise. Secondly, technology transfer and innovation associated with FDI can enhance the efficiency and competitiveness of the manufacturing sector. Thirdly, FDI can catalyze the development of a robust supply chain, fostering linkages with local businesses. Fourthly, attracting FDI can contribute to export expansion and trade balancing, aligning with the successful experiences of countries like Malaysia and Singapore. Fifthly, FDI often entails investments in infrastructure development, addressing critical bottlenecks in Pakistan's manufacturing sector. Finally, attracting FDI contributes to economic diversification and resilience, making the economy more robust to external shocks. In summary, a comprehensive and strategic approach that considers both foreign and domestic investment dynamics is essential to foster a resilient and dynamic LSM sector in Pakistan. Attracting twin investments not only aligns with global best practices but also positions Pakistan as an attractive destination for international investors, driving economic growth, innovation, and competitiveness in the manufacturing sector.

Goal 5: Increasing renewable energy production capacity from 7% to 25%

ICMA recommends pursuing a strategic objective that aligns with the national vision, aiming to enhance sustainability and decrease the LSM sector's dependence on non-renewable energy sources. Our proposal involves a significant increase in the production capacity of renewable energy infrastructure, from the current 7% to an ambitious 25% within the next 10 years. This initiative not only seeks to strengthen the presence of renewable energy in the overall energy mix but also strives to diminish the reliance of the industrial sector, particularly the LSM sector, on non-renewable sources. Embracing global trends and best practices, this would help position Pakistan as a frontrunner in sustainable industrial practices, fostering economic growth through environmentally conscious energy portfolio.

Mr. Shah Jahan Mirza, Managing Director of the Private Power and Infrastructure Board (PPIB), outlined ambitious plans of the Government during a webinar organized by ICMA. He unveiled strategies aimed at substantially increasing the share of green energy projects, specifically in solar and wind generation, from the current 31% to an impressive 62% by 2031. In alignment with these goals, the proposed increase in renewable energy production capacity, as suggested by ICMA, complements Mr. Mirza's vision. The combined efforts emphasize a comprehensive approach to reduce reliance on non-renewable sources, positioning Pakistan as a leader in sustainable industrial practices.

Figure 4.2



Source: Economic survey of Pakistan 2023, Design by ICMA

Analyzing the data in Table 4.2 from 2000 to 2020 reveals a noticeable positive correlation between renewable energy consumption and manufacturing growth in selected countries. Pakistan, exhibiting a significant renewable energy consumption rate of 46.4% and an average annual manufacturing growth of 4.2%, highlights the promising potential for advancing industrial development through further integration of renewable energy.

Renewable energy consumption growth and Manufacturing sector Growth (2000-2020)

Table 4.2

Country	Average Renewable Energy Consumption Growth (%)	Average Manufacturing Growth (Annual %)
Pakistan	46.4	4.2
India	36.7	6
China	18.3	11.3
Bangladesh	41.7	7.2
Malaysia	3.8	3.3
Vietnam	41.2	6.6

Source: World Bank, Analysis by ICMA.

In contrast, Malaysia, with a modest renewable energy consumption of 3.8%, maintains a comparatively lower manufacturing growth at 3.3%. Vietnam, with a substantial renewable energy consumption of 41.2%, demonstrates a robust manufacturing growth of 6.6%. This diverse performance among the countries underscores the intricate relationship between renewable energy adoption and manufacturing sector expansion, highlighting the need for tailored strategies based on individual economic contexts and priorities.

Benefits:

1. **Predictable and Stable Energy Prices:** Renewable energy projects in Pakistan have consistently demonstrated fixed costs, ensuring a sustained and stable energy pricing structure over the long term. Given the historical concerns within Pakistan's manufacturing sector regarding energy costs, the stability offered by renewable energy becomes a cornerstone. This predictability enhances cost control for businesses, facilitating improved financial planning and wiser investment decisions.

2. **Cost-Effective and Sustainable Sources:** Sustainable energy sources, prominently reflected in Pakistan's renewable energy consumption trends, contribute to operational cost efficiencies for manufacturing activities. The reduction in operational costs due to the adoption of sustainable energy sources directly bolsters the competitiveness of Pakistani manufacturers. This strategic shift enables manufacturers to offer more attractive pricing in the global market, potentially expanding market share and enhancing overall industry viability.

3. **Reliable and Stable Energy Supply:** With a significant proportion of renewable energy in the energy mix, Pakistan's manufacturing sector can benefit from a reliable and stable energy supply. Given the historical context of energy shortages impacting manufacturing operations, a consistent and reliable energy supply from renewable sources becomes instrumental. This improvement minimizes production interruptions, optimizes operational efficiency, and reduces downtime, ultimately increasing overall manufacturing productivity.

4. **Global Competitiveness and Environmental Attraction:** Pakistan's manufacturing sector stands to gain increased global competitiveness and attraction of environmentally conscious demand and investors through the adoption of renewable energy. International markets are placing growing emphasis on sustainability. By integrating renewable energy sources, Pakistan's manufacturing sector can position itself as environmentally responsible. This not only attracts customers who prioritize eco-friendly products but also draws investors seeking sustainable business practices.

5. **Reduced Dependence on Imported Fossil Fuels:** Strategic investment in renewable energy diminishes Pakistan's dependence on imported fossil fuels, providing resilience against external energy price fluctuations. Considering the economic impact of importing fossil fuels, particularly on the balance of payments, transitioning to renewable energy sources enhances economic resilience. This shift reduces vulnerability to global energy market fluctuations, contributing to a more stable economic environment.

6. **Long-Term Environmental Sustainability:** The promotion of renewable energy aligns with global sustainability goals, reflecting in a reduced carbon footprint for Pakistan's manufacturing sector. In light of environmental challenges faced by Pakistan, embracing renewable energy contributes to long-term environmental sustainability. This not only enhances the country's global image but also plays a crucial role in creating a healthier environment for future generations.

In summary, the data underscores the compelling need for Pakistan's Large Scale Manufacturing sector (LSM) to enhance renewable energy infrastructure. The benefits derived from such a shift are not only economically advantageous but also strategically position the sector for sustained growth, competitiveness, and environmental responsibility.

Correlation Coefficient between Renewable Energy Supply and Manufacturing Output

Table 4.2.1

(Correlation Coefficient = R)	R- Value	Results Interpretation
India	0.35	Positive relationship (Low)
China	0.20	Positive relationship (Low)
Vietnam	0.20	Positive relationship (Low)
Interpretation of Range	-1 ≤ 0 ≤+1	• (-) Negative sign shows Inverse relationship between "Renewable Energy Demand and Manufacturing Output". • + Positive sign shows Direct relationship between these two variables. • "0" Zero means no relationship between variables.

Source: World Bank, Analysis by ICMA.

The correlation coefficients presented in Table 4.2.1 reveal insights into the relationship between renewable energy consumption growth rates and manufacturing sector growth rates for India, China, and Vietnam. In the case of India, the correlation coefficient of 0.35 indicates a positive relationship, albeit a low one. This suggests a modest direct association between the growth in renewable energy consumption and the expansion of the manufacturing sector. Similarly, China and Vietnam exhibit correlation coefficients of 0.20, signaling low positive relationships between renewable energy demand and manufacturing output growth. The interpretation aligns with the understanding that as renewable energy consumption grows, there is a positive but relatively weak correlation with the growth of the manufacturing sector in these countries. It is crucial to recognize that correlation does not imply causation, and factors beyond the scope of this analysis may contribute to the observed relationships. Nonetheless, these findings emphasize the potential interplay between renewable energy adoption and manufacturing sector expansion in these economies.

Goal 5 Summary

ICMA proposes a strategic objective aligning with the national vision to boost renewable energy infrastructure production from 7% to 25%, reducing dependency on non-renewable sources in the Large-Scale Manufacturing (LSM) sector. Analysis of data from the Economic Survey of Pakistan 2023 and global trends shows a positive correlation between renewable energy consumption and manufacturing growth across selected countries. Pakistan, with a 46.4% renewable energy consumption rate and 4.2% average annual manufacturing growth, exemplifies potential for further integration. This shift promises diverse benefits, including stable energy prices, sustainability, global competitiveness, reduced dependence on imported fuels, and long-term environmental well-being.

Correlation coefficients for India, China, and Vietnam suggest a positive but relatively weak link between renewable energy consumption growth and manufacturing sector growth. While correlation doesn't imply causation, enhancing renewable energy infrastructure can significantly contribute to economic competitiveness, environmental responsibility, and long-term sustainability in Pakistan's manufacturing sector. This strategic initiative positions Pakistan for resilience, adaptability, and global leadership in sustainable industrial practices.

CHAPTER 05

Proposed Strategies for Achieving New Industrial Policy Goals

Chapter 5

Proposed Strategies for Achieving New Industrial Policy Goals

This chapter unveils strategies tailored to the new industrial policy's goals that we already identified in Chapter 4. From accelerating growth in the Large-Scale Manufacturing (LSM) sector to expanding renewable energy capacity, we examine methods to diminish dependence on non-renewable sources. Our focus extends to elevating employment rates within the industrial sector, rejuvenating and amplifying the export share of LSM. Furthermore, the discussion extends to the imperative task of attracting investments in the LSM sector, underscoring the significance of fostering an environment conducive to robust industrial development in Pakistan.

1) Strategies to Enhance LSM Sector's Growth Rate

Achieve Self Sufficiency:

Attaining self-sufficiency is pivotal for the prosperity of any industry, with a fundamental reliance on the accessibility of raw materials. The manufacturing sector's competitiveness is not merely bolstered by the importation of raw materials; rather, it necessitates a concerted effort to augment self-sufficiency. In this context, ICMA underscores the imperative of cultivating growth in the primary sector specifically in generating renewable resources.

ICMA is of the view that this strategic approach will help harness domestic resources, ensuring sustained viability and competitiveness for Pakistan's manufacturing sector.

Hybrid Technology Approach:

Given Pakistan's abundance of labor resources, the Large-Scale Manufacturing (LSM) sector should strategically adopt a hybrid technology approach. In the short term, prioritizing labor-intensive production methods can ensure cost efficiency. Simultaneously, incorporating capital-intensive methods in the production processes will facilitate scalability and efficiency in the long run.

ICMA is of the view that this dual strategy would help optimize production costs while ensuring the sector's sustainable growth over time.

Industrial-Rail Development:

Maintaining existing infrastructure is essential, but establishing a new industrial zone, equipped with growth-inducing facilities holds the potential to attract investments and amplify manufacturing output.

ICMA is of the viewpoint that the establishment of "Railway system in industrial area", can lead to increase in the efficiency and output of our manufacturing sector, in particular LSM sector.

Export promotion strategies:

ICMA emphasis on a strategy to focus on product and market diversification. The approach entails prioritizing the production of goods aligned with global demand trends. For instance, establishing domestic manufacturing facilities for semiconductors, versatile components utilized not only in smartphones but also in burgeoning sectors like automotive and industrial applications. This targeted strategy aims to bolster exports, thereby catalyzing output in the LSM sector.

Virtual Cluster and Information Hub:

ICMA strongly advocates the establishment of industry-specific Information Hubs and Digital Directories to form virtual clusters. This initiative aims to enhance the exchange of industrial information and foster collaboration across various sectors, thereby creating a competitive environment for businesses to procure raw materials and accelerate production processes.

By implementing these comprehensive strategies, Pakistan can lay the foundation for a vibrant, high-growth LSM sector, contributing significantly to the country's economic prosperity. Regular assessments and adaptability to changing global trends will be crucial for sustained success.

2) Strategies to increase industrial sector employment

Incentives for Hiring: Introduce financial incentives or tax breaks for manufacturers who actively contribute to increasing employment within the sector, encouraging job creation.

Apprenticeship Programs: Establish apprenticeship programs that provide hands-on training and practical experience to individuals, facilitating their entry into the manufacturing workforce.

Educational Partnerships: Foster partnerships between educational institutions and the manufacturing sector to ensure that academic curricula are aligned with industry requirements, producing graduates with relevant skills.

Workforce Retraining Programs: Recognize the dynamic nature of the manufacturing industry and implement ongoing retraining programs to ensure that the workforce remains adaptable to evolving technologies and industry trends.

Diversifying production across different regions: Rather creating industrial hub in one specific region, ICMA advises policy makers to diversify the manufacturing production facility to obtain full optimization from different regional labour availabilities. Which will increase employment opportunities in unprivileged areas, geopolitical stability and reduce other disruptions which arise for being in a particular location.

3) Strategies to increase the Export Share of LSM Sector

Online Platform of LSM Suppliers: ICMA identifies the need of TDAP to promote its online LSM supplier platform which will integrate the domestic producer to the international customer, this will create an opportunity to scale the production level and attract export revenue. China is following the similar export model in the form of "AliBaba.com".

Export Training Programs: ICMA emphasis on the provision of export training programs to educate manufacturers on international trade practices, regulations, and market dynamics will give confidence to individuals to invest. Equip manufacturer will help obtaining the knowledge and skills needed to navigate global markets effectively.

Trade Facilitation: Reduce government procedures for shipping and licenses to make business easier. Each zone will have a single office to connect the government and firms and conduct all the back-end work to simplify government procedures.

Market Research Analysis: Conduct an exhaustive economic analysis to ascertain viable export markets for LSM products. Evaluate demand patterns, competitor tactics, and trade regulations within the identified target markets. Such as creating a semi-Conductor chipset which are used by various industries including, cellphone, automobiles, laptops etc.

Promoting brand development to facilitate export initiatives: Invest in branding initiatives to enhance the reputation of Pakistani LSM products. Build a positive image that reflects the quality, reliability, and innovation of products manufactured in Pakistan.

4) Strategies to attract Investments to foster growth in LSM sector

Investment Information Hub: Adding to previously mentioned the need of a platform of information Hub of LSM supplier, ICMA Recommend Board of investment Pakistan to highlight the prioritize segments of manufacturing industry which have the potential to grow profitably which attract investment. In this regard, it is advised to create an "industry-wise Investment Information HUB", with proper investment guide lines and profitability ratios, it will provide transparent information to both domestic and foreign investors, which will help obtaining their confidence and can also ease the startup businesses.

Reduce Cost of borrowing: ICMA recommends to formulate and execute monetary policies aimed at lowering interest rates. This will reduce the cost of borrowing for investors, making investments in the LSM sector more financially attractive.

Leverage from Export Import Bank of Pakistan (EXIM): In September 2022, Government of Pakistan established an EXIM bank as an export credit agency to facilitate international trade of Pakistan. The manufacturer can explore its services to facilitate financing for export-oriented LSM projects.

Investor Education Programs: Conduct investor education programs to enhance awareness about the potential returns and benefits of investing in the LSM sector. Informed investors are more likely to engage in long-term commitments, positively influencing the overall cost of capital.

Global Talent Attraction: The infusion of global skills contributes to the LSM sector's competitiveness and technological advancement, aligning it with international standards. A diverse workforce enhances creativity and problem-solving capabilities, fostering a dynamic environment that is attractive to investors.

5) Strategies to enhance renewable energy production capacity

Establish local renewable production units: It is advisable to attract foreign and domestic proficient manufacturers of renewable energy systems to establish local production units. Which causes to enhance LSM sector output and employment opportunities.

Diversification of Energy Sources: Incentivize the adoption of solar, wind, and hydropower technologies in the industrial sector, this growing demand for renewable energy sources will help the newly established units of renewable energy manufacturer to scale and achieve the sustainability for the overall industrial sector of the economy.

Technological Innovation and Intellectual Property Right: To encourage innovation in renewable energy, the government can introduce intellectual property rights for a specified period. This will enhance efficiency and reduce costs of production for manufacturing firms.

Capacity Building and Skill Development: Invest in training programs to build a skilled workforce for the renewable energy sector. This can be done through collaboration with educational institutions and industry experts to develop specialized courses.

Awareness and Public Engagement: There should be a launch of awareness campaigns to educate industries and the public about the benefits of renewable energy. This will encourage stakeholders' acceptance for renewable energy sources and help scaling it's installed production capacity.

By implementing these strategies, Pakistan can embark on a sustainable path, reducing its carbon footprint, ensuring energy security, and promoting the overall resilience of the manufacturing sector.

Chapter Summary

In conclusion, the recommendations put forth by the ICMA for the LSM sector of Pakistan encompass a comprehensive and strategic approach to stimulate growth, enhance sustainability, and attract investments. The emphasis on achieving self-sufficiency through the cultivation of renewable resources and the adoption of a hybrid technology approach reflects a sophisticated understanding of the sector's intricacies. Additionally, the proposed strategies for industrial-rail development, export promotion, and the establishment of virtual clusters and information hubs underscore a commitment to creating a conducive environment for both domestic and foreign investors.

The multifaceted action plan extends beyond production considerations to address the energy sector, employment rates, and global market positioning, reinforcing the interconnectedness of economic variables. The recommended initiatives, such as the establishment of an industry-wise Investment Information Hub and leveraging the Export Import Bank of Pakistan, align with economic principles to reduce borrowing costs and enhance investor confidence. The call for global talent attraction further demonstrates the recognition of the role of a diverse and skilled workforce in bolstering competitiveness. In essence, these strategies, grounded in economic principles and industry insights, provide a comprehensive roadmap for propelling Pakistan's LSM sector towards sustained growth, resilience, and global prominence.

CHAPTER 06

International Industrial Policies

Chapter 6

International Industrial Policies

This chapter provides a comprehensive overview of international industrial policies, offering insights into the diverse strategies employed by nations worldwide to drive economic development and enhance global competitiveness. Examining the distinct approaches of both developed and developing countries, we delve into key aspects such as innovation, trade dynamics, and sector-specific initiatives. As we explore the subtleties of international industrial policies, a sophisticated understanding emerges of the factors shaping the contemporary global economic landscape.

INDIA

On December 19, 2018, India introduced "the Strategy for New India @75" by NITI Aayog. This plan outlines forty-one important areas, acknowledging progress, identifying challenges, and proposing ways to achieve specific goals for the fiscal year 2022-23. Here are some key highlights from their strategies to promote industrial growth and development.

a) Driving Economic Growth: Demand, Infrastructure, MSMEs

- **Government's Role in Domestic Manufacturing:** Harnessing public procurement and mega projects such as Sagarmala, Bharatmala, and industrial corridors is crucial for the government to catalyze domestic manufacturing. This strategic approach ensures the aggregation of demand, providing a substantial impetus to the manufacturing sector.

- **Regulatory Streamlining:** Complementing project initiatives with regulatory simplification is imperative to facilitate seamless business processes. The exemplary case of the Madhepura Electric Locomotive Project underscores the effectiveness of technology transfer facilitated by regulatory simplification.

- **Real-time Project Monitoring:** Establishing a real-time project monitoring portal, overseen by NITI Aayog's Development Monitoring and Evaluation Office, in collaboration with state governments, is instrumental in identifying and promptly addressing potential roadblocks.

- **Self-Sufficient Manufacturing Clusters:** Encouraging the development of self-sufficient manufacturing clusters with empowered Cluster Administrative Authorities offering single-window clearances is essential. The focus on addressing infrastructure gaps, including logistics and warehousing, within industrial corridors is pivotal for sustainable growth.

- **FDI Promotion:** The government should actively encourage additional Foreign Direct Investment (FDI) in manufacturing, especially when complemented by buybacks and export orders, fostering a conducive environment for international investors.

- **Digital Approval Processes:** Streamlining discretionary powers at various governance levels through digitized processes, ensuring electronic approvals that are transparent and time-bound, is a significant stride toward efficient governance.

- **Technology-Driven Job Opportunities:** Fostering collaboration between government, industry, and academia is essential to identify evolving manufacturing needs in the era of disruptive technology. This collaborative effort is crucial for preparing a skilled workforce that aligns with emerging job opportunities.

- **E-commerce as an Economic Driver:** Recognizing e-commerce as a potent driver of economic growth, the government should implement recommendations such as improving internet access, digitizing payments, and enhancing transportation infrastructure to further boost this sector.

- **Harmonization of Quality Standards:** Aligning Indian quality standards with global norms, particularly in sectors like the medical device industry, is vital for enhancing exports and leveraging international trade agreements more effectively.

- **Make in India:** Launched in 2014, this initiative aims to promote manufacturing in India and transform the country into a global manufacturing hub. It focuses on attracting foreign investment and improving the ease of doing business.

- **FDI Policies:** India has implemented policies to liberalize foreign direct investment (FDI) across various sectors to encourage international collaboration and investment.

b) Focus on MSMEs:

- **Mega Parks and Clusters:** Establishing mega parks and manufacturing clusters in labor-intensive sectors with shared facilities, alongside urging state governments to set up plug-and-play parks, is crucial for promoting international productivity standards.

- **Accommodation for Workers:** Ensuring decent accommodation for workers in new mega parks within reasonable proximity is a fundamental aspect of MSME support.

- **Expert Committee for MSMEs:** Forming an expert committee to swiftly examine sector-specific challenges in MSMEs and provide actionable recommendations within a short timeframe is essential.

- **TREDS Portal for PSUs:** Ensuring the registration of all public sector units on the Trade Receivables Discounting System (TREDS) portal through the Department of Public Enterprises (DPE) contributes to a supportive financial ecosystem for MSMEs.

- **R&D in MSMEs:** Initiating a small business research program in select ministries to foster research and development in MSMEs is a strategic move to enhance their capabilities.

c) Industry 4.0 Adoption:

- **National Initiative for Industry 4.0:** Launching a major initiative to promote the adoption of Industry 4.0 practices in sectors like automobiles, pharmaceuticals, and chemicals is imperative for digitization and interconnection.
- **Training Programs:** Collaborating with leading institutions to create specialized training programs on 'Smart Manufacturing' addresses the shortage of high-tech human resources in the Industry 4.0 landscape.
- **Center of Excellence for R&D:** Developing the Central Manufacturing Technology Institute (CMTI), Bangalore, as a Center of Excellence for R&D in Industry 4.0 technologies and systems is crucial for advancing technological capabilities.
- **Incentives for Industry 4.0 Adoption:** Offering incentives to industries, particularly MSMEs, producing key components of Industry 4.0 and supporting those adopting its standards for a fixed period is a strategic move.
- **Standardization for Reliability:** Enhancing the reliability of smart manufacturing systems by creating Indian standards for systems and sub-systems is a foundational step for sustainable growth.

d) Ease of Doing Business:

- **Single Window System:** Introducing a "single window" system in all states that streamlines processes for licenses and approvals based on stakeholder consultation is instrumental in fostering a business-friendly environment.
- **GIS-Based Planning:** Implementing GIS-based maps for pre-approved land banks, specifying environmental requirements, building bylaws, and safety norms is a proactive measure.
- **Environmental Audit Scheme:** Replicating successful environmental audit schemes like Gujarat Pollution Control Board (GPCB) in other states based on third-party certification is a prudent move.
- **Accreditation Agencies:** Developing accreditation agencies to fortify third-party certification systems contributes to the overall reliability and transparency of the business environment.
- **Integration of Portals:** Ensuring the seamless integration of the Shram Suvidha portal and state agencies' portals is essential for efficient information exchange and governance.

BANGLADESH

The Government of Bangladesh has devised the National Industrial Policy to enhance the optimum growth in the industrial sector. The following are the highlights from some recent policies:

a) Introduction of Bangladesh's Industrial Policy 2016

The government of Bangladesh, recognizing the pivotal role of industrialization, initiated the Industrial Policy of 2016. The primary objective was to expedite industrial growth, foster inclusive development, generate productive employment, promote entrepreneurship, integrate women into the industrialization process, and establish international market linkages. Small and medium enterprises (SMEs) were specifically identified as a key sector for industrial growth, along with a focus on heavy industry and selected service sectors.

b) National Industrial Policy 2022: Economic Prosperity and Technological Advancements

The core objective of Bangladesh's National Industrial Policy 2022 is to enhance economic prosperity, elevate sector-specific productivity, and achieve excellence in manufactured products. This involves leveraging the technological advancements of the fourth industrial revolution and embracing labor-intensive industrialization with domestic raw materials and resources. The policy aims to accelerate domestic and foreign investments in the private sector, facilitated by a government commitment to creating an investment-friendly environment.

c) Key Priorities for Industrial Growth

- **Infrastructure Strengthening:** Prioritize the enhancement of industrial sector infrastructure.
- **Social Security System:** Establish a comprehensive social security system for industrial stakeholders.
- **Barrier Elimination:** Remove impediments to private investment and economic growth.
- **Human Resource Development:** Focus on developing a skilled workforce for the industrial sector.
- **Government Institutions Profitability:** Enhance the profitability of government institutions involved in industrial development.
- **Sectoral Focus:** Within this framework, special attention is given to the Leather and Leather Goods Industry, a significant contributor to foreign exchange earnings. The government has set an ambitious export target of $5 billion by 2024, supported by the Leather and Leather Goods Industry Development Policy 2019. Recognizing its potential, providing essential facilities is anticipated to make a substantial contribution to Bangladesh's overall economic landscape.

RUSSIA

Russia has set out strategic policies for industrial advancement, placing emphasis on aerospace, automotive, shipbuilding, pharmaceuticals, and information technology in its industrial development strategy. To foster collaboration, heighten competitiveness, and facilitate knowledge exchange among enterprises in specific sectors, the government actively advocates for the formation of industrial clusters. The following are the highlights of the policy:

- **Industrial Development Strategy:** Russia has identified priority sectors for industrial development, including aerospace, automotive, shipbuilding, pharmaceuticals, and information technology.
- **Cluster Development:** The government promotes the formation of industrial clusters to encourage collaboration, enhance competitiveness, and facilitate knowledge sharing among enterprises in specific sectors.
- **Industrial Development Fund:** Russia has established the Industrial Development Fund to provide financial support, including loans and guarantees, to industrial enterprises for modernization, innovation, and capacity expansion.
- **Special Economic Zones (SEZs):** SEZs offer tax incentives, simplified administrative procedures, and infrastructure support to attract investments and promote industrial activities in specific regions.
- **Innovation Promotion:** The government encourages R&D and innovation by providing grants, subsidies, and tax benefits to support research activities, technology transfer, and the commercialization of innovative products and technologies.
- **Skolkovo Innovation Center:** The Skolkovo Innovation Center serves as a hub for innovation, providing support to startups, promoting collaboration between industry and academia, and facilitating technology development in key sectors.

USA

The industrial policy of the USA reflects a strategic approach aimed at fostering economic growth, enhancing global competitiveness, and fortifying the nation's manufacturing sector. Rooted in collaborative efforts between government, academia, and industry, various initiatives and programs are meticulously designed to support advanced manufacturing, bolster small and medium-sized enterprises, attract foreign direct investment, promote exports, develop a skilled workforce, and invest substantially in critical infrastructure. The following are the highlights of the policy:

- **Advanced Manufacturing Partnership (AMP):** AMP constitutes a cooperative endeavor involving the government, academia, and industry, aimed at endorsing advanced manufacturing research, development, and workforce training.

- **Manufacturing Extension Partnership (MEP):** This initiative is dedicated to furnishing technical support and assistance services to small and medium-sized manufacturers, with the overarching goals of bolstering competitiveness, amplifying productivity, and nurturing a climate conducive to innovation.

- **Select USA:** The "SelectUSA" Initiative stands as a governmental endeavor strategically designed to encourage and facilitate Foreign Direct Investment (FDI) in the USA. This program operates by disseminating crucial information, extending assistance, and providing support to foreign companies keen on initiating or expanding their business operations within the nation.

- **Export Promotion:** The government actively facilitates and champions export promotion by collaborating with entities such as the International Trade Administration (ITA) and the U.S. Commercial Service. These agencies play a pivotal role in offering valuable resources, conducting comprehensive market research, and delivering essential trade promotion assistance to American businesses venturing into international markets.

- **Workforce Development:** The USA implements diverse workforce training initiatives strategically tailored to equip individuals with the requisite skills demanded by the dynamic manufacturing sector. These programs encompass apprenticeships, vocational training, and collaborative partnerships with educational institutions and industry stakeholders.

- **Infrastructure Enhancement Strategy:** The government has articulated a comprehensive plan involving significant investments in infrastructure, specifically targeting transportation, energy, and broadband sectors. This strategic initiative aims to amplify logistical capabilities, bolster connectivity, and elevate overall industrial competitiveness.

- **Innovation and Research Support:** The U.S. emphasizes policies that encourage innovation and research and development (R&D). Tax incentives and grants are often provided to businesses engaged in R&D activities.

- **Trade Policies:** The U.S. has a history of advocating for fair trade practices and enforcing policies to protect domestic industries from unfair competition.

CHINA

- **"Made in China 2025":** This is a comprehensive initiative launched in 2015, aiming to transform China into a global manufacturing leader. It focuses on promoting high-tech industries such as information technology, robotics, green energy, and new materials.
- **State-Owned Enterprises (SOEs):** China has a significant number of state-owned enterprises, and the government plays a crucial role in guiding these companies to achieve strategic goals.

GERMANY

- **Mittelstand Support:** Germany's small and medium-sized companies (SMEs), also known as the 'Mittelstand', are the country's strongest driver of innovation and technology and are renowned across the world. Germany's industrial policies focus on supporting the "Mittelstand," are considered the backbone of the German economy.
- **Technology and Innovation:** Germany places a strong emphasis on technology and innovation, with policies aimed at fostering research and development in various sectors.

SINGAPORE

- **Technology and Innovation Hub:** Singapore's industrial policies focus on becoming a global hub for technology and innovation. Initiatives include investment in research and development, creating a skilled workforce, and fostering a business-friendly environment.
- **Trade and Logistics:** Given its strategic location, Singapore emphasizes policies that support international trade and logistics, making it a crucial player in the global supply chain.

BRAZIL

- **Industrial Diversification:** Brazil's industrial policies aim to diversify its economy beyond traditional sectors. Initiatives focus on promoting industries such as agriculture, manufacturing, and technology.
- **Import Substitution:** Historically, Brazil has implemented import substitution policies to reduce reliance on imported goods and promote domestic industries.

JAPAN

- **Industrial Competitiveness:** Japan's industrial policies historically emphasize enhancing the competitiveness of its industries. Initiatives include support for technology development, innovation, and international collaboration.
- **Public-Private Cooperation:** The Japanese government actively collaborates with the private sector and academia to drive research and development and improve industrial capabilities.

FRANCE

- **Strategic Industrial Sectors:** France has identified strategic industrial sectors such as aerospace, automotive, and technology. Policies focus on supporting these sectors through targeted investments and research initiatives.
- **Innovation and Research:** France places a strong emphasis on innovation, science, and research to maintain a competitive edge in global markets.

UNITED KINGDOM (UK)

- **Industrial Strategy:** The UK's industrial strategy aims to boost productivity and competitiveness. It includes support for sectors such as technology, clean energy, and advanced manufacturing.
- **Regional Development:** The UK emphasizes policies that promote industrial growth and innovation across different regions, aiming to reduce regional disparities.

SOUTH KOREA

- **Strategic Industries:** South Korea has a history of identifying and supporting strategic industries. Policies aim to promote technology-intensive sectors such as electronics, automotive, and information technology.
- **Global Competitiveness:** South Korea's industrial policies often focus on global competitiveness, with initiatives to encourage exports and international collaboration.

AUSTRALIA

- **Resources and Energy:** Given its abundant natural resources, Australia's industrial policies often center around the development of its resources and energy sectors.
- **Innovation and Technology:** Australia emphasizes policies to boost innovation and technology in various industries, including mining, agriculture, and renewable energy.

MEXICO

- **Export-Oriented Policies:** Mexico has historically pursued export-oriented industrial policies, with a focus on sectors like automotive, aerospace, and electronics.
- **Trade Agreements:** Mexico has actively pursued trade agreements to enhance market access for its industries and attract foreign investment.

NIGERIA

- **Diversification Beyond Oil:** Nigeria's industrial policies aim to diversify its economy beyond oil and gas. Initiatives focus on sectors such as agriculture, manufacturing, and infrastructure development.
- **Economic Growth:** Policies are geared towards promoting inclusive economic growth and reducing dependence on oil revenue.

SOUTH AFRICA

- **Economic Diversification:** South Africa's industrial policies aim to diversify the economy beyond mining. Initiatives focus on manufacturing, technology, and services.
- **Black Economic Empowerment (BEE):** Policies like BEE aim to address historical inequalities by promoting the participation of black South Africans in the economy.

TURKEY

- **Export-Oriented Growth:** Turkey has historically pursued an export-oriented industrial policy. Focus sectors include automotive, textiles, and machinery.
- **Technology and Innovation:** Recent policies aim to enhance technology and innovation capabilities to improve competitiveness.

THAILAND

- **Promotion of Industries:** Thailand's industrial policies focus on promoting key industries such as automotive, electronics, and tourism.
- **Eastern Economic Corridor (EEC):** The EEC is a flagship project aimed at transforming Thailand into a technology and innovation hub.

MALAYSIA

- **Vision 2020 and Industry 4.0:** Malaysia's Vision 2020 outlines aspirations for a fully developed country. Industrial policies include the adoption of Industry 4.0 technologies to enhance manufacturing.
- **Global Halal Hub:** Malaysia aims to be a global hub for halal products, with policies supporting the halal industry.

VIETNAM

- **Export-Led Growth:** Vietnam's industrial policies have historically focused on export-led growth, particularly in sectors like textiles, electronics, and manufacturing.
- **Renewable Energy:** Recent policies aim to develop renewable energy sources and promote sustainable industrial practices.

SWEDEN

- **Innovation and Sustainability:** Sweden's industrial policies emphasize innovation, sustainability, and a focus on clean technologies.
- **Collaboration with Academia:** The Swedish government actively collaborates with academia and industry to drive innovation and research.

CHILE

- **Economic Diversification:** Chile's industrial policies aim to diversify its economy beyond copper mining. Initiatives focus on sectors like agriculture, forestry, and technology.
- **Attracting Foreign Investment:** Policies are designed to attract foreign investment and foster a business-friendly environment.

NEPAL

- **Hydropower Development:** Nepal's industrial policies aim to leverage its hydropower potential for economic development.
- **Tourism Promotion:** Policies also focus on promoting tourism as a key industry.

AFGHANISTAN

- **Reconstruction and Development:** Afghanistan, in its efforts toward reconstruction, emphasizes policies to develop various sectors, including agriculture, mining, and infrastructure.
- **Foreign Aid and Investment:** Policies are designed to attract foreign aid and investment for economic development.

SRI LANKA

- **Infrastructure Development:** Sri Lanka's industrial policies include initiatives for infrastructure development to support economic growth.
- **Export Promotion:** The government emphasizes policies to promote exports, particularly in the textile and apparel sector.

MALDIVES

- **Tourism and Fisheries:** Given its geography, the Maldives focuses on policies to boost tourism and fisheries as key economic drivers.
- **Sustainable Development:** Policies aim to balance economic development with environmental sustainability.

BHUTAN

- **Hydropower and Tourism:** Bhutan's industrial policies often center around hydropower development and sustainable tourism.
- **Gross National Happiness (GNH):** Bhutan uniquely emphasizes GNH as a guiding principle in policymaking, considering not just economic indicators but also happiness and well-being.

Chapter Summary

This extensive examination of international industrial policies encompasses a diverse array of nations, each presenting unique strategies for fostering economic development and enhancing global competitiveness. From India's comprehensive approach, emphasizing demand, infrastructure, and MSME promotion, to Russia's strategic focus on aerospace and innovation, these countries exemplify distinctive models. The U.S. strategically prioritizes advanced manufacturing and export promotion, while China's "Made in China 2025" targets global manufacturing leadership. Germany champions its SMEs ('Mittelstand') and technology, with Singapore emerging as a prominent hub for technology and innovation. Brazil endeavors to diversify its economy, and Japan concentrates on bolstering industrial competitiveness. France, the UK, South Korea, and Australia underscore innovation and provide sectoral support. Policies in Mexico, Nigeria, South Africa, and Turkey range from export-oriented approaches to economic diversification. Thailand, Malaysia, and Vietnam prioritize key industries, and Sweden, Chile, and Nepal emphasize innovation and sustainable development. Drawing insights from these global strategies can strategically help in Pakistan's formulation of a new industrial policy, facilitating the integration of elements like demand stimulation, regulatory efficiency, and technology adoption to fortify sustainable growth and elevate global competitiveness.

References

All Pakistan Textile Mills Association (APTMA):
https://aptma.org.pk/industry-insights/

Bangladesh: (National Industrial Policy Bangladesh):
http://brcp-1.gov.bd/wp-content/uploads/2022/03/Final-Report_Industrial-policy-review-draft_03.01.2022.pdf

China: (ERIA and SME Promotion Law China):
https://www.eria.org/SME%20Development%20in%20China_A%20Policy%20Perspective%20on%20SME%20Industrial%20Clustering.pdf

India: (Ministry of MSME India): https://msme.gov.in/

IFC: https://www.ifc.org/en/home

Ministry of Energy: https://power.gov.pk/

National Transmission and Despatch Company, Power System Statistics 47th Edition May 2023:
https://ntdc.gov.pk/ntdc/public/uploads/services/planning/power%20system%20statistics/Updated%20Version%20of%20Power%20System%20Statistics-May%202023.pdf

OGRA: https://www.ogra.org.pk/

Pakistan Bureau of Statistics (PBS): https://www.pbs.gov.pk/

SBP: https://www.sbp.org.pk/index.html

SECP: https://www.secp.gov.pk/

SMEDA: https://smeda.org/

Third Five-year Plan, Government of Pakistan: https://www.pc.gov.pk/uploads/plans/3rd_five_year_plan.pdf

World Bank: https://databank.worldbank.org/

World Bank, Doing Business Report 2020:
https://documents1.worldbank.org/curated/en/688761571934946384/pdf/Doing-Business-2020-Comparing-Business-Regulation-in-190-Economies.pdf

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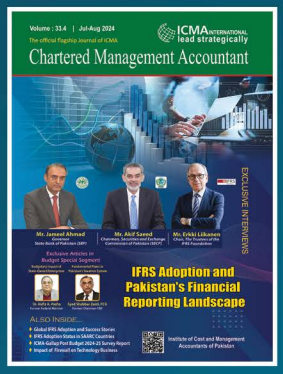

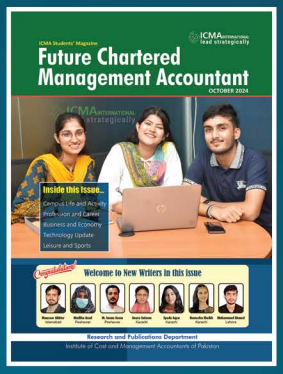

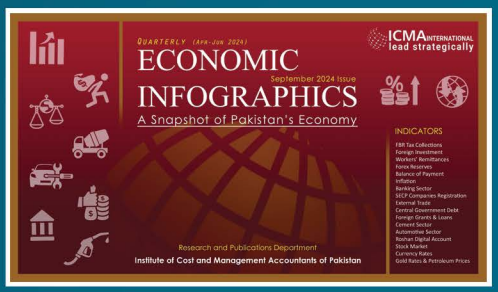

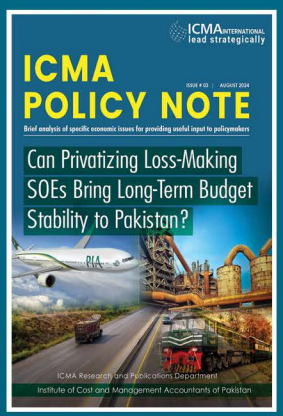

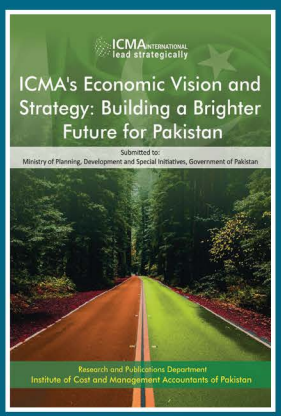

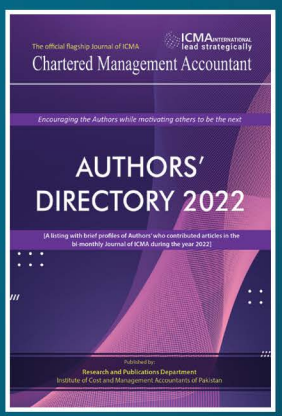

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