

Insights from UNCTAD-SPRC Pakistan Green Industrialization Project

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Pakistan in the Midst of Poly-Crises

STRUCTURAL PROBLEMS OF MACROECONOMIC MANAGEMENT



The saving and investment rate at around 15% since the 1960s

Low FDI in manufacturing, resulted in slow technological transformation and production of low-value-added products.

Gross Public Debt at 74 % of GDP as in June 2023

Pakistan's exports have been stagnant, declining from \$25 billion in 2011-2012 to \$23 billion in 2022-2023.



Fiscal year 2022-23 received \$27.03bn in workers' remittances, down 13.6pc from 2021-22

Pakistan's trade deficit at \$ 27 Billion during 2022-23

With contractionary policies, fiscal deficit reduced to 4.6% of GDP in FY2023 from 4.9% of FY2022.

Tax collection is 10.4% of GDP with a declining trend.

Inflation at record 31 % and interest rate at 22 %

FLOODS: *ECONOMIC CONSEQUENCES & DAMAGES*

- The 2022 floods have highlighted Pakistan's considerable vulnerability to climate change, despite its contribution of less than one percent of global greenhouse gas emissions.
- The domestic supply chains were severely disrupted as a result of these floods.

Damages: \$ 14.9 B.

Housing:
\$5.6B

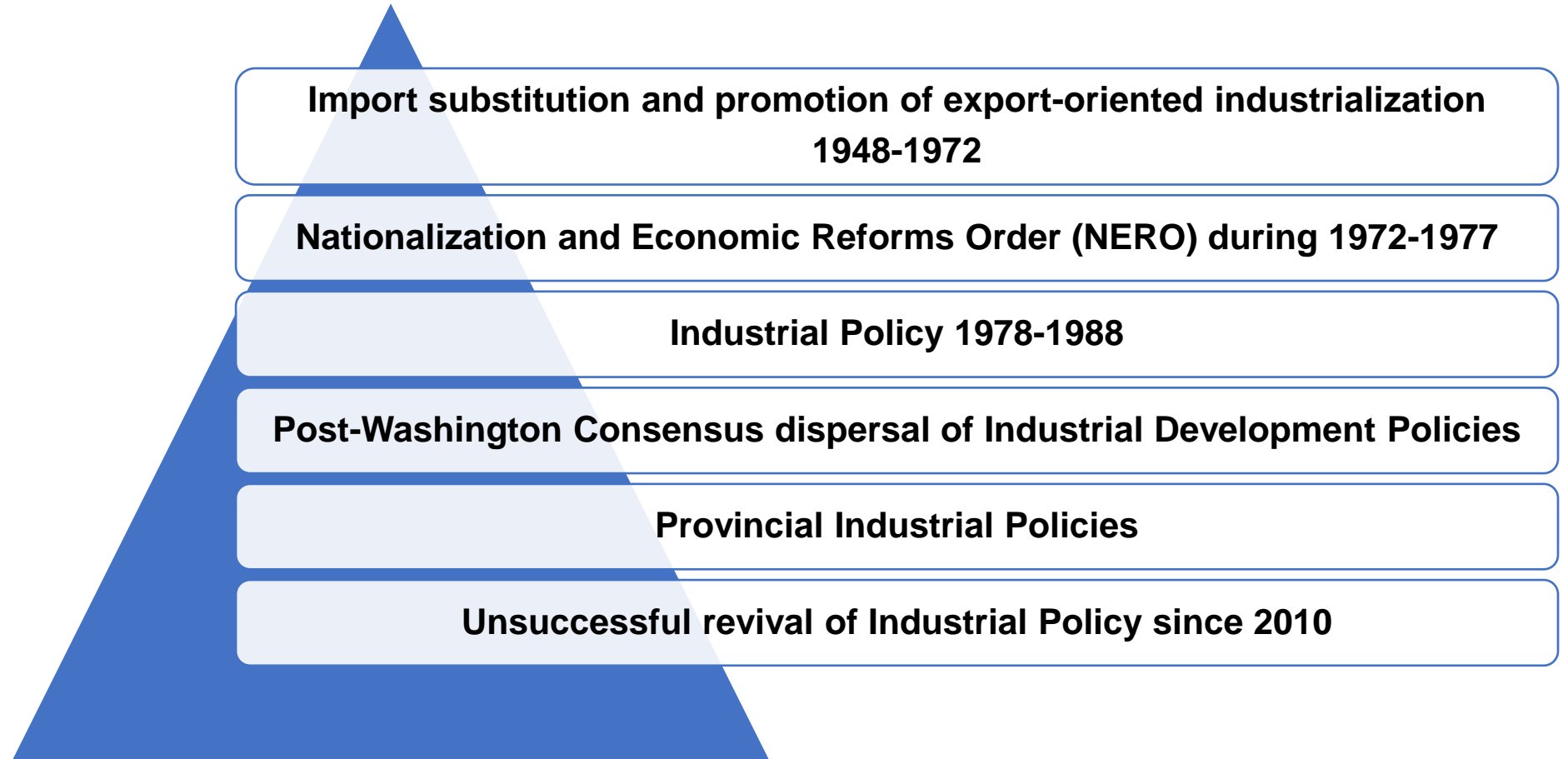
Agriculture:
\$3.7B

Communication:
\$3.3B

A GDP loss
of \$ 15.2 B.

Rehabilitation
\$ 16.3
Billion.

Industrial Policy History Of Pakistan: From Import Substitutions To Liberalization, Deregulation, Privatization



Green Gaps

LAUNDRY DETERGENTS

Popularized by seductive advertisement, per annum consumption of laundry detergents in Pakistan is 33,000 tons and growing 20-25% per year but detergent waste is leading to growth of duckweeds and eutrophication (algal growth that kills aquatic life) of lakes and water channels. Chemical compounds used in detergents burn human, can cause cancer or hormonal issues and also affect marine life.

“Synthetic Detergent for General Purposes 2017” law is enforced but not observed

Informal/unregistered low quality detergent production factories/units proliferating on a big scale

Few effluent treatment arrangements

Exact labels are missing on packing

Little financial help in developing/importing right kind of machinery.

PLASTICS

Pakistan uses 3.3 million tons of plastics in a year, of which only 3% of the used plastic is recycled as 55 billion single use plastics used in Pakistan in a year. Plastic industry contributes 15% to the GDP. The carbon footprint of producing plastics is very high.

Recyclability of plastics is low in Pakistan as other materials such as metals, are mixed with the used plastic

Little sustainability research on plastic products

The implementation of plastic bans is limited

No labels and information on recycling of products

Problematic Plastic Waste import policies and practices including the recycling of the recycled plastics

COOKING PRACTICES & KITCHENWARE

Pakistan wastes 30-40 billion cubic feet of gas in kitchens (a loss of \$300 million) due to poor quality Stoves, which are responsible for 2% of methane emissions. The decayed and rusty pans responsible for metals release in atmosphere, with carcinogenic effects of Teflon and PFOS/PFAS chemicals

Pakistan Standards and Quality Control Authority has a detailed provision in the form of Standards for Domestic Gas Stoves.

→ POORLY ENFORCED

No standards set On Pots and Pans

Fire and flame literacy is poor

Environment friendly designs and materials of pots not yet mainstreamed

GHEE & COOKING OIL

Pakistan's edible oil imports: US\$ 4 billion as Pakistanis consumes 2.3 million tons of cooking oil per year; an average Pakistani consumes 18 kgs of ghee cooking oil per year – highest in the world

Oil industry uses excessive amounts of water, toxic fertilizers, and fuel

Environmental standards not properly enforced on oil industries

Informal oil and ghee producers not registered and monitored

Oil industry environmental footprint information is not present on labels

Weak vegetable oil testing facilities

TEXTILES

Textiles, the largest of industrial sector of Pakistan in terms of output [8.5 % of GDP], exports [60 %], industrial value addition [25 %], employment [38 % of formal labour] is a heavy fossil fuel based energy user and a transportation heavy sector, with serious water use, chemical use and land use issues.

Structural changes required for emission reduction are slow, except in large exporting firms

Lack of micro-level objective standards for each segment of a very long supply chain for GHG, Water, Chemical use and waste disposal

Lack of effective oversight by environmental protection agencies

Lack of balance between energy based decarbonization and traditional environmental production

AGRICULTURE

Multi-functional agriculture in Pakistan, with agriculture-livestock, agriculture-forestry interactions, contributes 23% percent of GDP, providing food, fodder, livelihood, raw materials to industry and 37% of employment, responsible for 46% emissions but highly vulnerable to climate change.

Concentrated use of agricultural inputs & natural resource exploitation resulting in soil and water pollution

Land inequality, insecure tenancy, poor agricultural extension

Low productivity, resource inefficiency, and limited adoption of modern technologies

TRANSPORTATION

Accounting for 23 % of total GHG at present, emissions from Transport Sector are forecast to grow from approximately 35.4 MtCO₂e in 2012 to approximately 80.7 MtCO₂e in 2030. 30 % of vehicles to be shifted to electrical vehicles [EVs] by 2030.

Problems in mass adoption of EVs: Under the new EV policy, ambitious targets of shifting 30% and 50% of new car and 2/3 two wheeler sales, respectively for 2030. But the investment in infrastructure needed to establish a network of charging stations is almost absent and incentives for EV production not in force

Slow Switch to Low Carbon Fuels: Euro 5 in 2020: Oil refineries and automobile manufactures sought two years time – not yet compliant

Climate Policy Response to the gaps in green manufacturing: Pakistan's NDCs 2021

Voluntary contribution in reduction of 50% of emissions (35% through conditional and 15% through unconditional measures) by 2030.

Reduction of CO₂ emissions by 148.76 MtCo2e by 2030 through 10 Billion tree plantation

Transit to 30% of renewable energy sources by 2030

Switch to 30% of electric vehicles by 2030

Increasing the coverage of Protected Areas from 12% to 15% by 2023.

Continuation of investments in Nature Based Solutions (NBS)

No generation of power through imported coal

Introduce new sectors like blue carbon ecosystem

CLIMATE POLICY RESPONSE TO THE GAPS IN GREEN MANUFACTURING



Incorporating economic incentives to promote emission reduction by upgrading industrial processes and technologies.

Preparing voluntary CSR guidelines and encouraging the corporate sector to create a CSR-fund to cover carbon emission reductions efforts in industrial sector.

Promoting the integrated “Cleaner Production” strategy in the Industrial sector by making more efficient use of inputs such as energy, water, raw material, etc.

Promoting the use of energy efficient motors in the industrial sector.



Encouraging the industrial sector to have periodical “Energy Efficiency Audit”.

Developing capacity to monitor and estimate emissions locally for each industry.

Ensuring that technology transfer is accelerated for the industries like cement manufacturing to control emissions without hampering the production process

CLIMATE POLICY RESPONSE TO THE GAPS IN GREEN MANUFACTURING

Industry is not listed among the sectors of interest under adaptation in Climate Policy 2021 and is listed under the “Mitigation” with the additional following measures:

Detailed aerosol emission impact assessment studies must be made	Ensure that technology transfer is accelerated for industries like cement manufacturing,	Control emissions without hampering the production process;	Explore and introduce incentives for industries to adopt low- emission technologies e.g. Dual- functional materials for carbon capture, utilization, and storage (CCUS);	Legislate opportunities for industry to facilitate transition to circular economy model	Boost the market demand for recycled products.
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Sticky Binding Constraints in developing a fit to purpose Green Industrial Policy and integrated Green Industrialization strategies

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- Industry is becoming green but slowly and selectively**
 - Policy responses are fairly strong but enforcement is weak**
 - Better and more Data needs to be used effectively**
 - Sporadic Green innovation is in development but is still expensive and relatively unknown**
 - Structural inequities in agricultural sector**
 - Preponderance of informal economy**
 - Mis-match with the regional realities**

Key Question for Discussion

Industry, policy community, development partners, civil society, technology and investment providers, have a soft consensus that Green Industrialization is a public good.

Can we imagine an Industrial Policy sans state; an industrial policy in dispersal?