

Industrial Policy, its Spatial Aspects and Cluster Development in Pakistan ToRs

Introduction

The revival of the Pakistan economy hinges on the performance of its industry and its forward and backward linkages. In the past year and a half the country has seen a dramatic retardation of economic activity characterized in particular by a stagnating manufacturing sector.¹ Given the fact that the potential of growth and development of a country is inextricably linked to the extent of investment, urbanization, and industrialization, the continued dismal performance in industrial growth in Pakistan does not augur well for the future. Therefore it is imperative to develop an Industrial Policy which is implementable and has the ingredients to provide the much needed impetus to manufacturing and exports. While focusing on the revival and restructuring of the Industry, these policies would be guided by the overarching objective of achieving efficient, sustainable and equitable development, including specific interventions to connect fast growing areas with lagging regions, promote economies of agglomeration, and foster higher manufacturing specialization to compete in global markets.

Pakistan is urbanizing rapidly and today has the highest population growth rate² in the South Asian region with hordes of unskilled entrants into the labor force every year. These adverse demographics pose a serious challenge to effective policy making. If the industrial base of the country does not expand to absorb this surplus labor, the burgeoning unemployment in both urban and rural areas is likely to have serious socio-economic and political ramifications.³ On the other hand, a growing population has the potential to become a significant economic asset, if adequate policies are in place to facilitate the development of a large, healthy and skilled labor force. Therefore a central motivation and aim of the Industrial policy is to generate widespread employment and raise income levels across the country, with the longer term aspiration of achieving convergence in living standards in rural and urban areas. This would subsequently reduce the incidence of poverty and lessen the widening inter and intra regional income inequality. An industrial policy, which emphasizes domestic as well as international linkages, focuses on the development of small and medium scale industries, and provides an impetus to services, trade, transport and other ancillary sectors, can achieve the objective of inclusive and broad based growth.

¹ Between the years 2008-09 output in the manufacturing sector contracted by 3.3 percent. Small and Medium manufacturing sector maintained its growth of last year at 7.5percent. Large-scale manufacturing depicted contraction of 7.7 percent (Economic Survey of Pakistan 2008-2009).

² 1.8% in 2007-08, (Economic Survey of Pakistan 2008-09).

³ The manufacturing sector in 2007 -08 absorbed only 13% of the country's labor force compared to 11.5% in 1999, a meager 1.5% point increase over the course of almost a decade, (Economic Survey of Pakistan 2008-09).

The formulation of the Industrial Policy would be in accordance with the overall growth and development priorities of the Government of Pakistan (GOP) as broadly identified by the “9-point” Plan put forward by the Planning Commission (PC) and the Prime Minister’s Economic Advisory Council (EAC). In fact most of the priority areas highlighted by the Plan where ‘deep, broad-ranging, and sustained’ policy intervention is required are in sync with the objectives of the Industrial Policy being proposed here. For example, Industrial Competitiveness, Human Capital Development, Energy, Capital Markets, Public-Private Partnership for Infrastructure and Institutional/Administrative reform are some of the relevant areas which would be dealt with in considerable detail in the Industrial policy report.

Industrial Policy Objectives and Challenges

As mentioned above, the scope and nature of policy or government intervention in the industrial sector has to be guided by the broader objective of achieving efficient, sustainable and equitable development. Thus the framework of a viable industrial policy has to be multi pronged with a focus on designing implementable programmes which increase the competitiveness of firms in an open economy environment and recognize Pakistan’s geographic conditions at the local, national, and international levels. The government’s role is therefore to facilitate or create an enabling environment for increased investment in both the existing sectors and potential sectors within the country. In other words the policies should consolidate and strengthen existing comparative advantage and at the same time harness potential or dynamic comparative advantage resulting in a diversified and internationally competitive manufacturing and export base. These policies entail both “spatially blind” policies that facilitate trade, promote flexible labour and provide adequate social services, as well as geographically targeted interventions that promote economies of agglomeration and connect high growth regions with lagging areas.

The specific policy interventions derived from the industrial strategy should be aimed at correcting market failures which arise because of externalities or the “public” nature of required services and infrastructure. For example, firms, as a result of labour turnover and technology appropriation, might not have the incentive to invest in the development of their technical and managerial capabilities such as labour skills upgrading and technology development thus creating the reason d’être for government intervention. Hence, the prescribed role of government is focused - only intervening in areas where it can be most effective in facilitating the private sector achieve higher levels of efficiency and productivity.

The industrial policy is aimed at designing concrete solutions to meet the emerging challenges which stem from the gradual erosion of the country’s industrial competitiveness in an increasingly open and specialized trading environment. The growth rate of the manufacturing sector has been declining due to persistent structural weaknesses resulting in a gradual de-industrialisation in the country. The structure of the manufacturing industry has not changed substantially over time, it remains primarily

resource-based (textile industry) and low technology type (light engineering, sports goods etc).

The Investment to GDP ratio continues to be low (around 20% of GDP) in comparison to main competitor countries like India (33%), Sri Lanka (30%), Bangladesh (26%) and China (42%)⁴. The main impediments to structural change in the manufacturing sector range from poor business and investment environment, inadequate physical infrastructure, credit market failures, underdeveloped industrial technology development systems and low skills and education levels. These weaknesses continue to constrain investment and manufacturing growth and have not been adequately addressed in the past. Moreover, global trends show that economies of scale have become more important than natural endowments in international trade. This means that firm competitiveness is increasingly determined by its fixed costs of production, but also by its proximity to workers, customers, and new ideas. Thus, Pakistan industrial policy must be complemented with policies that facilitate a transition from resource-based manufacturing to activities based on agglomeration economies.

With rapid trade liberalisation Pakistan is facing multiple problems and challenges in its traditional export markets and products. Exports such as textiles, garments, soccer balls, tanned leather are losing share in the world market while domestic firms are competing against increasing inflows of imported manufactures.⁵ Foreign exchange earnings have declined, putting additional pressure on the manufacturing sector to boost net export earnings in the face of decreased international demand due to the world wide recession.

Pakistan has historically relied on a regulatory and a 'hand out' approach for industrial development. The promotion of a narrow range of exports based largely on imported inputs or patronage of industries which are fast losing share in international markets, i.e., textiles, are just examples of that approach. As a result of this closed net policy, Pakistan's exports are concentrated in some 45 products with the major share only taken by a few products.⁶

The changing international trade environment, which places pressure on governments to liberalize trade and investment regimes, calls for innovative policies for both industrialization and trade. Such policies and resultant programmes should entail closer public-private partnerships to enhance the productive and transaction efficiency of manufacturing firms. These policies should also create incentives and opportunities for greater diversification and value addition of manufactured products which would result in

⁴ CIA World Fact Book

⁵ In 2005 Pakistan's share of textiles and clothing in the EU, the largest market for the country's T&C exports, declined by 0.6 percentage points to 3.0%. (Asian Development Bank, Asian Development Outlook, 2006).

⁶ Pakistan's export of major items remains concentrated on five items namely; cotton manufactures, leather, rice, synthetic textile and sports goods. These five categories accounts for 73.5 percent of total exports during July-March 2008-09. (Economic Survey of Pakistan, 2008-2009).

access to international markets. Moreover, the policy programmes should be designed to help create a more conducive business environment, ensure investment in the necessary physical infrastructure, and help develop industrial technology at the firm level in order to raise the technical and managerial capabilities of domestic firms. Above all, keeping in view that firms compete in both domestic and international markets, public policy design should fortify and strengthen the competitive capability of firms. In addition, being geographically distant from large international markets, Pakistan needs to reassess its regional integration strategies to take advantage of its fast-growing neighbours.

Spatial Aspects of Industrial Development

Pakistan's efforts to develop and implement an industrial policy must incorporate geographical considerations, including a better understanding of current economic densities in its large and medium cities, the distances from main production sites to distribution sites, and the costs associated with divisions across international borders.

In this context, Pakistan faces the challenge of removing spatial impediments in the country and enlarging the spread of economic development activities. The most crucial spatial developments in this regard would include the development of a wide range of additional alternative places in the country to locate business and public services.

Geographical considerations that must inform and complement Pakistan's industrial policy are broad in scope and include the mix / combination of housing for low and middle income groups to maintain a balanced labour structure, improvement of infrastructure to enhance economic competitiveness, urban renewal and restructuring required to increase liveability and create space for expanding urban activities, and a spatial development that promotes sustainable natural resource use.

In addition, industrial policies must also respond to the inevitable spatial aspects of income and production.⁷ Agglomeration economies are powerful in driving economic change and facilitating economic growth, as they help create internationally connected cities, reduce cost of production through concentration and take advantage of network effects. Economic integration can best be achieved by taking advantage of market forces. While this ultimately translates into unbalanced economic growth, if well managed, it has the potential of generating resources for a balanced development.

Agglomeration economies also have their limits. Recent work for Pakistan indicates that the costs of environmental degradation correspond to at least about 6 % of the country's GDP. 50 % of the total damage is related to air pollution (both indoor and outdoor). While indoor air pollution may be more a rural issue, most of the outdoor seems linked to mobile sources - a likely urban phenomenon. This plus other public bads like congestion are likely to decrease the net benefits of agglomeration in the country. Under this ongoing process in the country, policies addressing spatial aspects should define the role of government in its different levels, with the goal of ensuring that the country is able to

⁷ World Development Report 2009, "Reshaping Economic Geography"

capture the benefits of agglomeration at similar rates as other countries. Policies should also stimulate balanced urban – rural development and define the role that infrastructure, industrial policy and environmental protection play in a balanced development for the country.

A crucial element in integrating geographic considerations into industrial development policies is the role of clusters and Special Economic Zones (SEZs), defined as a geographic area that contains a high concentration of related firms with both horizontal and vertical relations among them, often with preferential economic treatment.⁸

Industrial clusters and SEZs have similar objectives in the sense that they are intended to foster industrial growth and enhance the productivity and competitiveness of firms within their boundaries, taking advantage of agglomeration effects, such as:

- *Labor market economies.* The concentration of firms in a particular industry reduces the cost of searching for workers with specialized skills.
- *Economics of intra-industry specialization.* The concentration of industries allows for greater specialization among firms, with amplified opportunities for outsourcing.
- *Communications and innovation.* Geographic proximity promotes communication among firms, thereby enhancing the speed with which innovations are adopted.
- *Scale economies in providing public services.* Because there are economies-of-scale involved in providing physical infrastructure services, such as water supply, telecommunications, transportation and electricity, those services can be provided at lower unit cost. In Pakistan, for example, use of industrial clusters has made it convenient to treat wastewater using “Common Effluent Treatment Plants” (CETPs).

Taking into account the importance of clusters to industrial development, as well as their potential contributions to addressing spatial aspects, policies also need to be developed based on Pakistan’s own experiences and international best practice, to promote cluster development in a way that maximizes agglomeration benefits and minimizes its negative effects. This is particularly relevant as experience from around the world indicates that maximizing the benefits of SEZs depends on the degree to which they are integrated with their host economies and the overall trade and investment reform agenda.

Scope of Work

The scope of work under this assignment would be defined by four central objectives:

⁸ International Finance Corporation and The World Bank, 2008, *Special Economic Zones: Performance, Lessons Learned, and Implications for Development*, Washington, D.C., p. 3. The following terms are subsumed under the SEZ concept: free-trade zones, export processing zones, special industrial and economic zones, and any other similar developments.

1. Prepare an Industrial Policy Report that builds upon existing work in the area by incorporating sectoral studies, JICA's 2030 vision for the Industrial Sector in Pakistan ("Towards a Vision 2030: Direction of Industrial Development in Pakistan", Business Review – Volume 2 Number 1, January – June 2007) and value chain analysis into the MOI&P Industrial Strategy Report 2005.
2. Develop a range of specific action plans that will operationalize the key elements of industrial strategy. This would be done by deriving policy conclusions from the sectoral analysis which would then be used as a basis to develop robust instruments or program's designed for the implementation of the strategy.
3. Support the development of a proposal for a spatial policy that is based on a thorough assessment of spatially relevant policy instruments which have an important role in reaching balanced development especially with respect to industrial development and taking into account Pakistan's rapid urbanization.
4. Inform the development of cluster and SEZ development policies, taking into account Pakistan's own experiences and relevant lessons from around the world.

This policy work is seen as an initial support towards a medium term intervention of the MOI&P to bring into operation the key strategic drivers of the medium term industrial strategy. The bulk of the work will be to design instruments or specific programs to make the policies implementable. The work would also help create the necessary institutional framework and linkages and networks between the public sector, private sector and academia that will push forward the actualisation of the strategic goals of industrial strategy of Pakistan.

The first part of the industrial policy work would emphasise the need to rejuvenate and restructure the manufacturing sector, consolidate and revamp the existing assets, and hence kick start the stagnating export growth with strategic leveraging of minimum additional resources from public and private sector. Therefore the focus of the initial work will be to upgrade the existing sectors so that they become more competitive in global value chains and are able to create and consolidate international market presence. The second part of this policy work will delve deeper into domestic sectoral and infrastructure gap issues in order to build a stronger base for competitiveness.

The work will focus on competitiveness of key clusters that have emerged historically. Whereas, at this stage the report will not question the optimality of the current map of the existing clusters, it will take a value chain approach to identify the major constraining factors that have impeded growth and export potential of these clusters. The policy recommendations would be drawn out of an analysis of sectoral competitiveness. The existing value chain work done by SMEDA and other organisations will be taken as the starting point in the first phase of the study and further value chain comparisons and benchmarking will be done using international comparators in the subsequent phases. The policies which would be derived from this analysis would thus be sector specific. At the

same time, however, they will have commonalities across them (e.g., the need for energy, human resource, regulatory framework, infrastructure, financing etc).

The work will also identify new potential winners in changing international trade scenario in order to help expand and diversify the exports base.

In terms of the spatial policy, the analytical work will focus on a series of policy notes that are likely to discuss existing domestic policies, Pakistan's infrastructure gap and relevant international experiences that enable agglomeration economies to outweigh disadvantages while achieving a balanced development. The policy notes will be consolidated in a single compendium which provides a menu of policy instruments that can facilitate spatial aspects of industrial development in Pakistan including their pros, cons and applicability in the country. The consolidated compendium will also identify infrastructure investments key for extracting the most benefits out of agglomerations while mitigating potential public bads associated with them.

The policy compendium is offered as the basis for a continued support to the industrial sector centred on best practice in industrial strategy and effective policy formulation at the national, regional and sectoral level. The High Level Committee created in October 2008 by the MOI&P will play a central role in facilitating the dialogue between different levels of government and the private sector.

Project Outputs

The main outputs resulting from this work include:

1) A modified and an updated version of the Industrial Strategy Report incorporating sectoral value chain analysis.

2) Implementable action programs from the modified strategy paper covering the entire range of critical policy, programme and support environment. The following are examples of some of the key policy programs which might be drawn out of the industrial strategy:

- Redefining the role of MOI&P to improve its facilitation and enabling role for the private sector and provinces by reviewing the existing policy level mechanisms for effective coordination and policy alignment between the key actors related to Industrial Development (MOI&P, Ministry of Textile, Ministry of Commerce, FBR, Provincial Industries Departments, WAPDA, SNGPL/SSGPL, Ministry of Communication, Railways, PIA etc.) and suggesting institutional mechanisms for a seamless and responsive coordination mechanism.

- Skills development and upgrade of workforce will be another priority area where implementable programs will be developed. Again one area of

particular focus would be to develop national standards for technical and vocational training and allied curricula, updating of existing curricula and syllabi on the basis of revised national standards and supporting programmes to assist national and provincial entities for adoption of new standards and curricula.

- Identify ways and means to strengthen industry-technical education linkages for demand driven skills development and placement;
- Identify and design interventions to enable the industrial sector meet environmental and social compliance requirements of international trade regime. This is an extremely important area and in future is expected to play a crucial role for branding and developing competitiveness.
- Sector specific international quality and standard compliance requirements would be looked at along with an analysis of existing gaps in terms of certifications, testing and destination market credible certifying laboratory infrastructure and identify means to address these gaps expeditiously.
- By focusing on the value chains of key clusters (accounting for firm size), policy and program instruments will be developed to upgrade the existing clusters and to facilitate development of newer competitive clusters. The branding and marketing of these clusters will also be addressed under the policy programme. The aim would be to achieve standards that allow Pakistani firms to enter international supply chains of worlds leading retailers such as IKEA, Walmart, METRO etc.

3) A compendium of policy notes containing a menu of policy instruments that can facilitate spatial aspects of industrial development in Pakistan. To begin with, the following background work will be prepared to support the development of sectoral policy notes:

- *Mapping different measures of spatial concentration* to provide useful insights on the geographic distribution of different social and economic indicators.
 - Population density
 - Poverty density and incidence.
 - Human capital infrastructure: education and health infrastructure across districts.
 - Distribution of Economic Activity (Agriculture, Industry, Services)
 - Agglomeration measure (the Ellison-Glaeser industry geographic concentration Index⁹, and regional specialization (Henderson, Lee and Lee, 2001).

⁹ Compare the current location of firms with a random location controlling for type and size of industry.

- Firms density
- Market access: Transport Network (road density across districts) and distance (travel time) to major cities (Bokemann, 1982)
- Infrastructure Gap Analysis: transport.
- *Addressing some relevant cross-cutting questions:*
 - Are regional disparities in education, health and road infrastructure influencing the incidence of poverty?
 - Are investments in education, health and road infrastructure less poverty reducing in regions where initial income disparities are high?
 - What factors are influencing locational choice?
 - Are places specialized in particular activities? Are they more suitable for different type of activities? How are they linked with the industrial estates and SEZs?
 - What are their main constraints for further growth? What is the role of transport (transport logistics and multimodal systems)?
 - How should infrastructure investment be prioritized? What role infrastructure and industrial policy are playing in the unbalanced growth / balanced development for the country?

Building on this background work, sectoral policy notes will focus on the following areas:

- *Pro poor infrastructure investment*, which will entail guidelines to devise infrastructure development policies that are pro poor in nature. Given specific policy interventions, regions facing high income inequality and poverty will experience greater difficulties in industrialization. How public sector investments in education health and road infrastructure can be used to bring about equitable development and increase in the living standards of the common man across spatial divide.
- *Urbanization and infrastructure*, which would entail; developing a national network of urban centers, strengthening the economic core areas, enhancing accessibility, improving the livability and socio-economic status of the cities, maintaining accessible recreational facilities in and around cities, preserving and strengthening the variation of identities between city and the rural areas, harmonizing urbanization and water economy and safeguarding environmental quality.
- *Logistics, Transport and Multimodal Systems*, which will respond to the challenges associated with the growth in passenger and freight traffic congestion within the country, as well as actions needed to ensure an effective connection between Pakistan's transport infrastructure and that of neighboring countries.
- *Locational policy for business and public services*, which shall present a view on comparative spatial advantages of various alternative locations for business and public services. Such specific themes as supply of construction material, space needed for cantonments and military areas, development of coastal areas and corridors for energy supply shall also be attended to under the locational policy, and

- *Spatial guidelines* for the spatial plans that will be prepared by provincial and district governments and tehsil municipal governments, which all those involved in their formulation would be bound to maintain.

The analytical work on clusters and SEZs will focus on answering the following questions:

- *Net benefits* -- What have been the net benefits (broadly defined) to Pakistan's industries of the various industrial clusters and SEZs that have been created?
- *Public services* -- As a result of the development of industrial clusters and SEZs, have advantages been reaped in terms of enhanced cost effectiveness in providing public services.
- *Recommendations for improvements* -- What steps could be taken to improve the development of Pakistan's industrial clusters and SEZs such that industries become more productive and competitive.

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TIMEFRAME

====> Months	1		2		3		4		5	
====> Weeks	1-2	3-4	1-2	3-4	1-2	3-4	1-2	3-4	1-2	3-4
Major Activities										
National Industrial Policy and Spatial Aspects										
1. Inception Report										
2. Draft National Industrial Policy including Spatial Aspects										
3. Workshop										
4. Final Report										

* Timeframe to start after Contract Signing Date