
Industrial Parks and Positive Economy Development in Kerala: Framework and Strategies

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Abstract

Industry and infrastructure of Kerala is ready to usher bright prospects and reflects the untiring efforts of the Government to showcase the State as a lucrative business hub. The State has discerned significant strides in industrial development along with strong economic fundamentals and optimism. Development of avant-garde infrastructure is an essential pre-requisite for rapid industrialisation and the Government is trying to provide better industrial infrastructure in the form of Industrial Parks, Industrial Estates, Industrial Clusters, Development Areas/Plots, and Special Economic Zones (SEZ). It has come forward with many structured and well-defined policies and pioneering initiatives to transform the State into a vibrant entrepreneurial society with faster, inclusive, and sustainable economic growth. The development of industrial parks as a constructive channel of industrial infrastructure has attracted the attention of policymakers in recent years as they can develop certain synergies and a typical entrepreneurial culture in the industrial economy of the country. It is in the context, the paper attempts to explore the economic imperative of industrial parks and its impact on the positive economy development of Kerala.

1.1. Conceptualisation of Industrial Parks:

An industrial park is a relatively large enclosed area of land in which there is a cluster of industrial units, either of homogenous or heterogenous character, so that its entrepreneurs can enjoy the specialised benefits of industry-specific infrastructure, special incentives and other concessions earmarked by the Government. The United Nations Industrial Development Organisation (UNIDO) defines Industrial Park as “a tract of land developed and subdivided into plots according to a comprehensive plan with or without built-up facilities, sometimes with common facilities for the use of a group of industries.” They are designed specifically in an easy, well-in-start manner with the

confidence of decent return on investments. By providing a strong legal and institutional framework, industrial parks pool resources and reduce costs, risks, and the delays associated with land acquisition, zoning and permitting. Costs are reduced through 'economies of scale' in the provision of common services and facilities. Buyers, producers, and suppliers can operate in the same location, thus cutting the transaction costs of economic learning while establishing new standards and customised norms of entrepreneurial behaviour. At their best, industrial parks align infrastructure provision and agglomeration economies to jolt industrial growth.

1.2. Theoretical Discourse and Rationale:

The idea of industrial parks is based on the philosophy of integration of relatively different functions into an industrial area and as such is characterised by a united conception, and a unique and highly particular configuration. The theory of industrial parks holds that Governments must provide public goods, particularly infrastructure, for the industrial firms to be competitive. The co-located firms generate agglomeration economies and so the public goods should be concentrated on areas of co-location. The provision of infrastructure will somehow induce the firms, and exemptions can be made that will further entice them and create better competitiveness. The rationale for industrial parks has traditionally been twofold: *First*, the provision of functional infrastructure is much easier to plan in a geographically limited space, particularly for the delivery constrained Governments.¹ *Second*, the concentration of firms can provide significant spillover effects both inside and outside the park – information spillovers, including knowledge and technology; the specialisation and division of labour among enterprises; the development of skilled labour markets; and the development of markets around the parks.²

1.3. Historical Background of Development:

Regarding the historical background of the development of industrial parks, it can be observed that the First Generation of Industrial Parks was established in early 1970s. These parks were driven by public sector development and operated with Government subsidies for services and facilities. They were basic compared to modern standards, with simplistic architecture offering halls and space for storage. Over the decades, the scope of services provided by the Industrial Parks has become more sophisticated and holistic. In the late 1970s and 1980s, the Second Generation of

¹ Marshall, Alfred (1920). *Principles of Economics*. London: Macmillan.

² Sonobe, Tetushi and Otsuka, K. (2006). *Cluster-Based Industrial Development: An East Asian Model*. New York: Palgrave Macmillan.

Industrial Parks was built with a challenging and more complicated architecture and greater attention given to the requirements of science, technology and business.

During 1990s, the Third Generation Industrial Parks emerged with greater flexibility in the use of buildings and space, and a wider range of support services to its clients. These were typical by the elastic use of the area and a wide portfolio of services. There was a gradual shift from ad-hoc private sector licensing to planned and coordinated public-private partnerships which led to improved and better services, greater product differentiation, and non-price competition. The industrial parks constructed since year 2000 are designated as Fourth Generation Industrial Parks. They are designed to promote new innovative industries, infrastructure, and technologies. The private sector develops, owns, and operates the park on a cost-recovery basis. The authority only regulates the activities within the confines of the park and outsources core functions to the private sector.

Over the decades, industrial parks have become increasingly flexible and have expanded the range of facilities and support services provided to the firms and individuals they host. More sophisticated industrial parks offer a wide range of common facilities and support services, such as information services, financial services, consultancy, technical guidance, training, joint research facilities and business support services to satisfy the specific and customised needs of the tenants. Further, sector-specific industrial parks are emerging and are more and more common today since they can create a critical mass and justify the provision of dedicated services, infrastructure, and utilities. At present, industrial parks have been a part of an international network of cooperating parks.

1.4. Operational Mechanism of Industrial Parks:

The development of industrial parks is still on nowadays and there is no one-size-fits-all model of industrial park as far as the regional economies are concerned. On the basis of specific needs assessment, they should be integrated into the regional innovation framework that recognises the social, economic, cultural, and environmental characteristics of each region and community, as well as the local governance competences and capabilities. For decades, the State-level industrial development corporations have been building industrial parks. Various schemes and policies are being framed by the Central Government also. The most visible recent attempt was the Special Economic Zone (SEZ) Programme, launched in the year 2005. Many successful industrial parks have

been built through both the Centre and State initiatives. The major steps involved in the successful operation of industrial parks³ can be enumerated as follows:

1. Identification of the park location.
2. Identification of potential demand and overall dimensions.
3. Procurement of land.
4. Design and dimensioning within the park (Master Planning).
5. Financing.
6. Financial structuring and planning.
7. Procurement of infrastructure building.
8. Construction of infrastructure.
9. Operation and maintenance.
10. Monitoring and evaluation.

These roles have been shared in many different ways between the national, regional, and local levels of the Government. There are as many as four types of entities for demand estimation, and designing and financing of the parks, namely: (i) 'developers' who typically prepare the master plan for the industrial parks, (ii) 'constructors' who construct the parks, (iii) 'operators' who manage the operation and maintenance of the parks, and (iv) 'users' who are the entrepreneurs occupying the parks themselves. In Kerala, the functional role of the first three categories of operation (that is, of the developers, constructors, and operators) is mainly performed by the Kerala Industrial Infrastructure Development Corporation (KINFRA) on behalf of the Government.

1.5. Eco-Industrial Parks and the Sustainable Development Strategies:

With the prelation of sustainable development strategies, the development of eco-industry and eco-industrial parks have been adopted as an important methodology to raise the prospects and coordination of the environment and economy. Eco-industrial parks are the business parks which are designed and constructed according to the principle of industrial ecology, cleaner production environment, and the idea of circular economy. They aim at achieving proper economic, environmental, and social interaction and thus seek to increase business competitiveness. They are the communities of manufacturing and service businesses located together on a common property with challenging management and explicit and transparent support systems. The concept of 'eco-

³ Saleman, Yannick and Luke Simon Jordan (2013). *The Implementation of Industrial Parks—Some Lessons Learned in India*. Washington, DC: World Bank.

industrial parks' has been first described at the United Nations Conference on Environment and Development held at Rio de Janeiro in 1992.

Eco-industrial parks are a variant of traditional industrial parks that strive for a more resource efficient and cleaner system, while at the same time share the core principles of traditional industrial parks of creating business niches, supporting business incubation, and competitiveness. An eco-industrial park obeys the 'reduce-reuse-recycle' principle of industrial ecology. Local communities embracing the concept of 'eco-industrial parks' are looking for some additional benefits such as higher economic efficiency, higher competitiveness, generation of additional revenues through positive relations at the community level, creation of jobs, solving the conflict between economy and environment, diminishing the demand on the country infrastructure, decreasing the effects of pollution, and using energy from regenerating sources and replacement materials.

Eco-industrial parks are receiving increasing attention in the light of the sustainability discourse. The potential benefits of eco-industrial development may be analysed under three heads, namely: (a) Benefits to the Community, (b) Benefits to the Environment, and (c) Benefits to the Business.

(a) Benefits to the Community:

Communities and enterprises creating eco-industrial parks will have common grounds for industrial development, which is much more competitive, more efficient, and much cleaner than traditional industrial parks. The major benefits of eco-industrial parks within the community perspective are listed below:

1. Expanded local business opportunities.
2. Reduces the waste disposal costs.
3. Improved environment and habitat.
4. Recruitment of higher quality companies.
5. Improved community partnership with business.
6. Minimised impact on infrastructure.
7. Enhanced quality of life near the eco-industrial parks.
8. Improved aesthetics.
9. Good jobs.

(b) Benefits to the Environment:

Eco-industrial parks help to achieve sustainable industrial development with the intention of increasing economic gains as well as environmental quality. They seek enhanced environmental,

economic, and social performance through collaboration in managing the environmental and resource issues. The explicit benefits of eco-industrial parks within the perspective of environment are listed below:

1. Continuous environmental improvement.
2. Reduced pollution.
3. Innovative environmental solutions.
4. Increased protection of natural ecosystems.
5. More efficient use of natural resources.
6. Protection and preservation of natural habitat.

(c) Benefits to the Business:

Eco-industrial parks bring together businesses that cooperate to minimise resource use and reduce waste. They function in accordance with a shared goal of maintaining the economic viability of industry and spreading the ideas about a more efficient and sustainable industrial development. The major benefits of eco-industrial parks within the perspective of business are listed below:

1. Higher profitability.
2. Enhanced market image.
3. High performance workplaces.
4. Improved efficiency.
5. Access to financing.
6. Regulatory flexibility.
7. Higher value for developers.
8. Reduction of operating costs.
9. Reduction in disposal costs.
10. Income from sale of by-products.
11. Reduction of environmental liability.
12. Improved public image.
13. Increased employee productivity.

Eco-industrial parks seek to ensure industrial development by bringing together a wide array of economic, social, and environmental benefits to the regional economy. They concentrate on closing the loop of materials and enhancing energy cascading in industrial areas. As a promising strategy to sustainable industrial development of the regional economy, eco-industrial parks integrate business success, environmental excellence, and community connections to create opportunities and improved ecosystems. Eco-industrial development is currently being spread out in both the industrial as well as developing countries.

1.5. Role of Industrial Parks in Positive Economy Development:

Industrial parks can have a positive influence on the revitalisation of business environment, transfer of modern technologies, and the restructuring and modernisation of industry in any economy. They are one of the most important factors supporting positive and progressive economy development. They strengthen the industrial base of small and medium-size towns, increase the efficiency of urban land use, and reduce rural-urban migration. Firms located in industrial parks often use the services of local companies, creating not only backward and forward linkages, but also diffusing economic learning to the wider business community. Well planned and equipped parks stimulate the relocation of industries to semi-urban or rural areas and help to relieve congestion and pollution in metropolitan areas. Further, industrial parks represent an opportunity for an influx of foreign investment and decrease of unemployment by means of creation of new jobs and other benefits of regional industrial development of the economy.

Industrial parks have undoubtedly a positive impact on business in a country where they are located. They are beneficial in the fact that they apply modern technologies and innovations, bring economic and innovative potential or internationally well-proven know-how, and thus support the process of reconstruction and modernisation of the industry. They create conditions for the development of small and medium size companies and their cooperation with other world-class entities, and therefore, have a positive effect on cooperativeness ability, labour productivity, increase of employment, and the research capabilities of a particular industrial region. The job opportunities created or transfer of technologies among companies will bring about certain synergic effects on the regional industrial economy, and will ultimately have a progressive impact on the overall economic development of the country.

1.6. Development Perspectives of Industrial Parks – The Kerala Context:

Being the industrial catalyst of the State, the Kerala Industrial Infrastructure Development Corporation, popularly known as KINFRA has been following an untiring effort of industrial development by promoting the concept of 'Industrial Parks' in Kerala. It brings together native resources and develops industrial infrastructure across the State by identifying and promoting core competency areas of each region, creating walk-in and manufacture environments, and wooing potential investors from across the world. KINFRA has identified certain core competency areas and is having 20 well-defined industrial parks at present. These parks offer comprehensive infrastructure, support services, attractive incentives and concessions, single window clearance, and

immense opportunities for the expansion and diversification of business. The development of industrial parks promotes the exclusive growth and development of the core industrial sectors identified by the Industrial Policy of the Government.

KINFRA has made remarkable achievements since its inception and has catered to the industry-specific infrastructure requirements of the State during twentyfive years of its untiring efforts. India's First International Apparel Park established at Menamkulam in Thiruvananthapuram, India's First Export Promotion Industrial Park established at Kakkanad in Eranakulam, India's First Infotainment Park established at Kazhakuttom in Thiruvananthapuram, India's First Food Processing Industrial Park established at Kakkancherry in Malappuram, India's First Herbal Park at Vythiri in Wayanad, India's First Rubber Park (Joint Venture Company with the Rubber Board, Government of India) established at Irapuram in Eranakulam, and India's First Marine Park (Joint Venture Company with the Marine Products Export Development Authority–MPEDA, Government of India) established at Aroor in Alappuzha, a high-tech Bi-Technology and Electronics Park at Kalamassery in Eranakulam are some of the notable achievements of KINFRA over the years.

Having been recognised the enormous development potential to revamp the State; the Government has accorded special emphasis to the Food Processing, Electronics, and Information Technology sectors as its sunrise sectors. KINFRA has set up exclusive parks for these sectors which has obtained the 'Product Specific Special Economic Zone' status from the Central Government. Using the ambience and world-class infrastructure facilities of KINFRA, these Product Specific Special Economic Zones aim to create an environment for the development of high-tech, non-polluting export-oriented industries in Kerala and thereby creating a top-notch industrial township, which could attract global players to the industrial arena of the State. With the potential to generate comparative and competitive advantages, these industrial parks attract better investments, support start-ups and new enterprise incubations, fostering technological learning, and facilitate innovative businesses.

The achievement of KINFRA in promoting an orderly development of industries by balancing social, cultural, regional, and ecological requirements across the State is highly remarkable. The industrial parks set up by KINFRA offer various incentives and opportunities for the rapid expansion and diversification of the industrial units. The 'single window clearance mechanism' inside the parks facilitates the speedy issue of various licenses, clearances, and certificates required for the start-up and nurturing of industries in the State. The infrastructure quality, abundance of workforce from

nearby places, easier access, connectivity, power and water availability, sewage and environmental protection, secure and peaceful environment, local people support, and efficient management of the parks, all helped to build and sustain confidence among the investors. With the objective of promoting, stimulating, and facilitating the development of a strong industrial base for the State, KINFRA acts as an agency in catalysing the development of physical and social infrastructure for the constant growth of its industry.

Within the context of an overall development strategy of the State, industrial parks can be valuable instruments to increase the regional and national industrial competitiveness. They offer the benefits of high quality infrastructure in build-to-suit sites, strategically located in key industrial areas. Industrial parks generally provide an excellent institutional framework, support services and physical infrastructure in a more specified and customised manner. They are the policy drivers to foster sufficing investments, employment, competitiveness, sustainable business strategies, and regional economic development. They can provide fertile grounds for leveraging new technologies, learning and innovations, jobs and markets, and ultimately value added links between academic research and industry. It can be seen that KINFRA has an enviable record in kick-starting the growth in competency industrial sectors. The future focus of KINFRA will be to consolidate the gains made in the past twentyfive years and to build a more responsive and dynamic system to attract larger investments in the industrial sector of Kerala and thereby creating an environment for the existing industries to consolidate and new industries to come up on a more viable and sustainable basis.

Conclusion

Successful industrial parks can become the growth and innovation hubs in the economy directing interactive learning and national economic development. Leveraging industrial parks as a policy instrument fosters competitiveness of the agglomeration economies and promote local supply chain development. They attempt to run-over the market and institutional imperfections, facilitate economic learning and catch-up, leverage new technologies and knowledge, and accelerate rapid industrial and economic development in transition economies. When successfully managed, industrial parks can provide an environment for enterprise and innovation to flourish and significantly influence the regional industrial economy of the State. In the context, KINFRA plays a pivotal role as the nodal agency of the Government to unleash the potential of the industrial sector in the overall economic development of the State.

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