Study on Industrial Park Development: Issues, Practices and Lessons for Ethiopia

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Ethiopian Development Research Institute

Addis Ababa, Ethiopia
February 2017
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Report citation:

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Executive summary
Despite remarkable economic growth over the last decade, Ethiopia has achieved little in terms of economic structural transformation. The key constraints that hinder economic transformation are lack of capital, foreign exchange, knowledge, infrastructure and institutional constraints in delivering efficient services. An economic growth model that focuses on high productivity sectors, especially the manufacturing and modern agriculture and services is imperative to maintain the growth performance of the economy and speedup structural transformation.

Industrial Parks (IPs) have been and are key policy instruments in enhancing economic transformation by attracting investment, promoting technological learning, upgrading and innovation and generating stable and decent employment. However, the challenge is that industrial park development (IPD) requires not only setting realistic goals but also designing feasible pathways towards the effective achievement of its goal. Towards this end, we proposed feasible policy and institutional options that consider specific features of Ethiopia, its comparative advantage, international experiences in IPD and the prevailing international opportunities.

First and foremost, clear understanding of the concept of IP and what it envisions to achieve in the medium- and longer term is essential among all key stakeholders. Not only does the study outline how industrial parks must be understood and implemented but it also proposes appropriate incentives to develop strong commitment among all political and government leaders for its effective implementation.

Second, we propose innovative institutional arrangement that enables to clearly define ‘the nature of Industrial Parks’ in Ethiopia. Accordingly, we suggest that priority be given to Agro processing, Textile and Leather and Leather products as well as metal (steel) and engineering sectors to realize maximum benefit from IPD in employment, foreign exchange, domestic linkage, and improving export and productive capability. Besides, to enhance technological learning, innovation and catch-up processes, it is strongly advisable to develop Science and Technology Parks. In line with these, key issues in selecting IP are also identified.
In line with its CRGE strategy and to remain proactive in addressing environmental issues from the outset, Ethiopia needs to brand its Industrial Parks as ‘Green’. Ethiopia has the advantage of reaping the substantial benefits of Eco–Industrial Parks. The study also proposes to establish Custom Special Supervision Zones and Logistics Parks to solve problems that arise from Customs, Logistics and Transport services.

Ethiopia can use IPs as laboratories to experiment or pilot some key reforms before they are made national policies. Examples include participation of foreigners in logistic services, innovation in the financial sector to address shortage of foreign currency, labour laws and so on. Besides, we propose options to ensure that linkage is created between park enterprises and the domestic economy, and Parks not to be ‘enclaves’. To realize these, we propose options on how to ‘target policy incentive’ and ‘clear and unambiguous legal framework at federal, regional and park levels’.

Third, in line with these institutional options, we propose innovative organizational arrangements at regulatory, implementing and park levels for the efficacy and effectiveness of IPD in Ethiopia. We propose key roles and responsibilities of the different organs, with the required organograms. Fourth, we also propose giving due consideration to Park promotion, development of appropriate Indicators that help to track the success of IPD and build domestic capacity in IPD at the early stage of IP development in Ethiopia.

Finally, we identify key outstanding issues that need to be given due consideration in the Industrial Park development of the country.
1. Introduction

1.1. Background of the Study

Industrial Park Development (IPD) is a policy tool for meeting a broader economic development goal. A number of issues determine its successful implementation. Among the key issues that crucially determine the successful implementation of IPD are its objective(s), governance system, policy preferences, administrative pattern, investment promotion and linkages to the rest of the economy. The report contains a detailed investigation of these and other key related issues, with the aim of identifying lessons to Ethiopia from selected countries such as SEZs in China. The issues, practices and lessons discussed in the report can also be a useful reference for other African countries that adopt IPD as a policy instrument for accelerating industrialization and urbanization. Accordingly, the experience of Special Economic Zones (SEZ) development in China and other countries, conceptual issues in IPD as well as practices in some selected Industrial Parks in China have been analysed. As one of the main aims of the study was to identify lesson to Ethiopia, which recently started to implement IPD as a policy instrument for its industrialization, specific features of Ethiopia which are deemed relevant to IPD has been assessed.

Field visits to Industrial Parks in Ethiopia and China, a review of literature on IP development, and discussions with stakeholders in both countries have been used as sources of information in the analysis. By doing so, the report provides insights on how to successfully implement IPD in Ethiopia.

The study has four parts. The first part focuses on conceptual issues in Industrial Park development and outlines key issues that need to be considered in IPD. The second part focuses on the exploration of the experience of SEZ development in China and other countries with the aim of understanding the practices of IPs. The third part focuses on the review of specific features of Ethiopia in the context of Industrial Park development. Building on the findings of the study presented under three parts, the report finally presents lessons and policy suggestions for Ethiopia so that the country can effectively and successfully implement IPD and thereby enhance industrialization. The study can also be used as a reference to other countries that adopt IPD as a policy instrument to enhance industrialization.
1.2. Rationale and Objective

Ethiopia has achieved a remarkable economic growth rate of 11% per annum in the last 12 years. Underpinning this growth is the expansion in the agriculture and service sectors, which are key economic sectors accounting for about 41% and 45% of GDP. The contribution of industry to GDP, on the other hand, has remained below 14%, which is less than half of the sub-Saharan Africa low income country average. Notwithstanding remarkable economic growth, the small role played by the industrial sector in the economy suggests that there has been limited structural transformation over the last decade. The slow pace of structural transformation of the economy is more visible upon disaggregation of the industry sector into its subcomponents. The contribution of manufacturing to GDP at 4%, to urban employment at less than 6%\textsuperscript{1}, and to annual GDP growth at 0.4 percentage points is low even by the standard of developing countries in Africa.

Given the importance of inter-sectoral linkages and the need to maintain the growth performance of the economy, structural transformation is imperative. Policymakers attempting to alter the structure of the economy needs to give due emphasis for industrialization to enable the country to transform its economy from agricultural-based to industry-led or towards an economic model based on high productivity sectors, especially the manufacturing and modern agriculture and services. Such transformation would be accompanied by significant value addition, employment generation, increased competitiveness domestically and internationally, as well as a more equitable distribution of income.

In its Growth and Transformation Plan (GTP), the government of Ethiopia (GoE) has already highlighted industrialization as a key to sustaining growth and as an impetus for economic structural transformation. More importantly, the GoE gives special attention to manufacturing development in particular and industrialization in general in its upcoming five years plan (GTP II). Thus, massive expansion of domestic and foreign direct investment in manufacturing is expected to drive the development of manufacturing industry.

In this respect, it is clear that notwithstanding remarkable economic growth that Ethiopia achieved in the past decade, there has been limited structural transformation. The key constraints that hinder transformation of the economy can be seen from the perspectives of the major

\textsuperscript{1} A survey by Central Statistical Agency in June 2013 puts the joint contribution of manufacturing, mining, quarrying and construction sectors to urban employment at 6.9% (CSA, 2013)
bottlenecks toward overall industrialization and specific implementation level constraints. The key constraints for industrialization and transformation are the lack of capital, foreign exchange, and knowledge. Specific constraints related to the manufacturing sector include those related to land acquisition, custom and logistic services and low capacity and absence of coordinated effort in the development and provision of infrastructure and public services. Rent – seeking behaviour in land provision and problems related to attitudes for the change in the land use pattern especially in rural areas; lack of reliable supply of road, power, telecommunication, water supply; absence of industrial effluents system; and poor provision of services in customs, visa and banking were key bottlenecks for the rapid development and expansions of the manufacturing sectors. The lessons from other countries including China show that these are typical constraints observed in a country at its early stage of economic development and during economic transformation.

Both conceptual and empirical evidence show that IPs are key instruments for attracting investment, promoting technological learning, upgrading and innovation, and generating employment, and thereby achieve economic transformation. For this reason, Ethiopia considers Industrial Park Development as one of the major policy tools towards industrialization.

As part of this effort, there are few industrial zones already established in Ethiopia. Preliminary observations indicate that industrial park development can significantly boost Ethiopia’s attractiveness for investment and business as, for example, demonstrated by intense interest to take up space in one of the park that is under construction. However, even though industrial parks’ transformational role in Ethiopia’s industrialization process is believed to be immense, the concept of industrial parks and effective and feasible policy and institutional arrangements is new to Ethiopia’s policy making process. Recognizing this, Ethiopia promulgated the IP proclamation on 9th April, 2015 to overcome the key constraints standing in the way of the rapid transformation of the economy from agricultural-based towards an economic model based on high productivity sectors, especially the manufacturing and modern agriculture and services. However, little is known on how to enhance the contribution of IPs to its development. This is mainly due to the fact that IP development is only a recent phenomenon in the country. Moreover, lack of comprehensive regulatory framework (such as absence of comprehensive legal, policy and organizational frameworks) and master plans also makes the effort more challenging. Besides, little is known about the process of their establishment, management, governance structure, model
of development and operation. In these regard, there is knowledge gap in how to minimize cost of infrastructure and land, reducing barriers, create conducive business environment, reduce cost of doing business, provide better public services and facilitation, maximize positive externalities and spill-over effects, pilot policies and minimize rent-seeking behaviour.

Furthermore, little is also known in defining the type of IP suitable for rapid industrialization in Ethiopia. The literature identifies different types of IP; there are basic indicators that define their type of establishment including their objective, composition and location. The type of IP should be seen in terms of achieving sustainable industrial development that involves technological and industrial upgrading, productivity improvement, maximizing external economies/spill-over, linkages with local economies, and promoting domestic private sector.

Hence, the biggest challenges for Industrial Park Development are setting realistic goals and designing feasible pathways towards meeting the goals. In lieu of this, this study aims to develop the specific forms and mechanisms that will enable this ‘transformational institution’, Industrial Park Development, to effectively achieve its goal.

1.3. Study approach
Towards achieving the aforementioned objective, the study explored the experience of SEZs in China and the specific features of Ethiopia. In addition, the experiences of other countries such as Singapore, South Korea, and others are reviewed.

Review of literature: a review of literature on the concept of Industrial Park development, previous scientific literature on China’s economic development strategy and its Special Economic Zones as well as experiences of other countries in IPD. We also reviewed of relevant empirical evidences on industrialization in Ethiopia as well as its policy and strategy documents, proclamation, annual reports, etc. The review on the experiences of countries include, but not limited to, specific context of countries at their early stage of IP development, historical patterns of IPs, policies and institutional aspects of IPs, success and challenges faced during implementations in the respective countries.

2 Export industrial parks, science and technology parks, airport and dry port Logistics Park and related facilities and services are few among many type of IP.
Key informant interview: the research team developed key indicators to make a discussion with key stakeholders\(^3\). Accordingly, the research team conducted interviews with selected policy makers and private sector. These include, among others, Ministry of Industry, Investment Board of Ethiopia, Ethiopian Investment Commission, managers of industrial zones in Ethiopia, and private sector representatives. Some of the points of discussions with China’s representatives of the Parks include, but not limited to, historical profile of the park, sectoral focus of the park, sources of FDI and major investors, governance and management aspects of Park, policy incentives, success factors as well as challenges during the development of SEZs.

Field visit: the research team, consisting of four senior researchers from Ethiopian Development Research Institute visited selected industrial parks in China and Ethiopia in March and April 2015. Some of the SEZs visited include Guangzhou Economic and Technological Development Zone, Qiuin Hai modern service cooperative zone, Shenzhen High Tech industrial park (SHIP), Shenzhen museum and one-stop-service at the municipality, Shanghai Caohejing Hi-Tech Park Development Corporation (CHTP), Suzhou industrial park, and Kunshan Economic and Technology Zone (KETD). The team also visited the Eastern Industrial Zone and Bole Lemi Industrial Park which were functional during the field visit. The visit was instrumental in observing and understanding the trajectory of SEZ/IP development in China as per the indicators. During the field visit to China SEZs, relevant information are collected using detail discussions with managers of the park; video and pictures about the park history, exhibition; presentations about the SEZ by the representatives of the Park and collection of relevant materials about the Parks.

\(^3\) See appendix for the key indicators used for discussion with key stakeholders including regulatory body, implementing organs, and other key actors in IPD such as developer, operator and park enterprises.
2. Key Conceptual Issues in Industrial Park Development

2.1. Concept of Industrial Park

The concept of industrial park can be dated back to the industrial revolution of the 18th century during which countries formed industrial areas to facilitate industrialization. These industrial areas vary depending on their causes of formation, and can be developed into industrial parks. Depending on sources of resources and types of operation, Industrial Parks can be classified into endogenous resource park, exogenous, and mixed Resources Park. Industrial Parks are also characterized by park specialization, ownership and land. For example, science & Technology Park, Research Park, eco-industrial park or export processing zone, free trade zone are types of specialized parks. In terms of ownership, parks may be developed and/or operated by public, private or public – private partnership. Parks may also be characterized by the land on which they developed. They could be ‘brown’, if the park is established on existing but disused facilities of former companies or ‘green’ if developed in a new area. Eco-industrial parks are a variant of industrial parks that strive for high environmental, economic, and social benefits, as well as business support.

With regard to definition of Industrial Park, many authors provided their own views (Ahrens and Meyer-Baudeck 1995: 88; Rhee, Katterbach and White (1990: 6) but the definition which was made by United Nations Industrial Development Organization (UNIDO) is considered to be the broadest definition. According to UNIDO’s definition

“An industrial park can be defined as a tract of land developed and subdivided into plots according to a comprehensive plan with or without built-up (advance) factories, sometimes with common facilities and sometimes without them, for the use of a group of industrialists.”

(UNIDO, 1997, p.10)

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4 Industrial Areas are centralization and gathering of industry in a certain area and those of high level have developed into national industrial bases. Ruhr Industrial Areas in Germany and Pittsburgh Industrial Areas in US are two examples of Industrial areas with distinctive industrial features but cannot be called Industrial Park.

5 Some of the definitions of IPs are (Ahrens and Meyer-Baudeck 1995: 88): "A tax-free zone and free ports, which are implemented in order to facilitate (foreign) trade turnover, to improve the refinancing possibilities of enterprises, and to make these areas attractive to foreign and domestic investment; Import or export processing zones, which favour the production and processing of importable and exportable; Enterprise zones (zones of free economic activities), primarily established in industrial countries as an instrument of regional policy; Free banking and insurance zones and technology parks, implemented to increase the international competitiveness of domestic banks and insurance companies and to improve, respectively, the transfer of knowhow and the diffusion of technical knowledge."
Industrial parks are generally used as policy instruments for industrialization and urbanization. As a tool for industrialization, industrial parks are used to improve the competitive power of enterprises by improving their productivity and profit while at the same time decreasing costs and improving quality of products. As a tool for urbanization, Industrial Parks are used for controlling industrial development, obtaining systematic urbanization, balancing regional development, and pioneering new cities. Industrial parks can serve to overcome hurdles that developing countries face to achieve fast and sustainable economic development such as market imperfection and barriers to access to information, technology, and finance; as well as high transaction costs because of lack of infrastructure and weak institutions (Memedović, 2012).

The development of industrial parks has passed through different generations. The first generation of IPs were established in early 1970s, driven by public sector development and operation with government subsidies for services and facilities. Industrial Parks developed in late 1970s and 1980s were mainly focusing on science, technology and business. During the 1990s, industrial parks emerged with greater flexibility in the use of buildings and space, and a wider range of support services supplied to firms. There was a gradual shift from ad-hoc private sector licensing to planned and coordinated public private partnerships. Private sector involvement led to improved services, greater product differentiation and non-price competition. The most recent wave of industrial parks constructed since the late 1990s are designed to promote new innovative industries and technologies, as well as to create attractive environments for employees with facilities such as housing, medical services, shopping and educational establishments.

There is no one-size-fits-all model of industrial parks. Framework conditions for industrial parks differ considerably between and within countries. To maximise the chances of success, several strategic decisions must be taken during the planning stage including the strategic objectives of the park, financing, the type of companies and sectors that the park wants to attract, and the range of services to be supplied to the tenants. It is important to conduct specific needs-assessments and adapt the industrial park model to the social, economic, cultural and environmental characteristics of each region and community.

While there are various issues that are important for the successful implementation of IP, the fundamental issue is the overall effects that are expected from them, and depending on the

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6 Ersin Türk, An Evaluation of Industrial Park Policy of Turkey: Izmir as a Case Study, 42nd IsoCaRP Congress 2006
expected effect, the policy questions that need to be addressed. Industrial Parks can have specific
effects, which include, among others, employment, foreign capital earning and improve the export
sector; technology transfer; agglomeration; economies of scale in the provision of infrastructure;
built human capital; improve domestic economy through direct economic linkages; experiment
new development policies; reduce cost of regulation; and improve availability of product varieties
(in both quality and quantity). Generally, the effects from Industrial Park (IP) can be grouped into
the following three categories. First, they offer incentives for foreign investors, which increase the
expected rate of return so that the attractiveness of the host country relative to other countries
increases. This requires answering basic question: ‘what incentives are required to attract in
sufficient amount of FDI? What are the main obstacles to them and how can IPs help to reduce
these?’

Second, IPs can support the transformation of the whole economy, by direct linkage effects,
reallocate effects and through experiments which can be first conducted in the IPs before they
are realised in the whole country. Linkages are an influential factor for the transmission of effects
from the IPs to the rest of the country. Without enough linkages, the Parks will only be enclaves
generating some income for the home country, but not developing the whole potential. Being able
to make experiments is especially relevant for leaders/politicians in transforming economies,
particularly this is true when they typically do not have experience in this kind of situation.

Third, IPs can help leaders of the host country to meet their political and economic goals
since IP allow them to take different interests into account at the same time. The political economy
point of view is especially substantial because it is the most compelling explanation why a country
uses IPs in the first place. It can give an answer to the question why it is the IPs approach that the
political decision-makers choose to open the country7. All these issues and expected effects will
be discussed in this report with particular implications to Ethiopia. These and other fundamental
issues in IP development will be discussed on section.

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7 Pearson (1991) discusses that it is not enough to understand the opening up process as the setting of the investment
framework. Instead, one has to look at the bargaining process between the host country and the foreign investors. On
the one hand this bargaining process takes place on the national level and translates into the laws regulating foreign
investment. On the other hand the bargaining takes place at the firm level as well, which is central in the analysis for
China, because the state as joint venture partner is directly involved in the bargaining process as well at both levels.
The following sub-sections briefly discuss the key issues that should be addressed for successful implementation of Industrial Parks.

2.2. Nature of the Park

It is important to define the nature of the park at the initial stage of the park so that the operation and development process for its transformation and upgrading can be tracked. It can also be useful to address bottlenecks for its development and minimize the future risks associated with unforeseen circumstances. In this regard, it is worth to give due emphasis to the following points. First, the type or key function of the park should be clearly defined at its initial stage. Second, there must be a clear understanding of the park’s position whether the park needs to be ‘Bonsai theorem’ and ‘Cobweb theorem’\(^8\). Third, it should define its relationship with the enterprises located in it and clearly state its business model. Fourth, it should clearly define its sources of strategic resources. In this case, while foreign based enterprises are key sources given it is well managed; it should be clear that domestic enterprises are main and sustainable source for its strategic sources. Fifth, since Park is developed to bring more benefit and promote economic development during a certain period of time, it is essential to define clearly the mechanism to obtain the pre-defined benefits from the park. This is especially crucial in Export Processing Parks, in which the relationship between the processing trade and the general trade of the import and export of the park. In such cases, a balanced approach is worth adopting\(^9\).

2.3. Strategic Resources of Parks

Among the economic resources crucial for economic development, capital is the principal one. Developing countries have shortage of capital, which they need to acquire internally and from abroad. Attracting foreign direct investment is a major source of capital. Absorbing capital resources by establishing parks is a necessary condition for developing countries like Ethiopia. In

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\(^8\) ‘Bonsai theorem’ compares the park to a large living room, and the foreign enterprises within the park are the beautiful bonsai, which makes the room looks ever more imposing and symbolizes the prosperity of the parks. The theorem tells us that no matter how impressive the bonsai are, their roots and property rights have nothing to do with the living room (park), and once they removed the living room is empty. Similarly, the ‘cobweb theorem’ tells us that a spider spins a web to net bugs from everywhere and the more powerful the web is, the more bugs it can net to nourish the spider and the more nutritious the web becomes. The question is who is the web and who is the bug?. The parks claim to be the web, which nets the international capital, but the truth may be the opposite.

\(^9\) If the majority of the export is the processing trade of the park, the host country can control neither the trading volume nor the country to which exported. In this case, the host country cannot gain the benefit.
order to attract capital through FDI, parks need to be competitive and should possess features that make them especially attractive. Among these, the following are crucial:

- **Land Resources:** Own resources and endowments such as land that they can supply to foreign enterprises with attractive prices;

- **Labor resources:** parks should also have comparative advantages in the labor market in terms of labor availability, price of labor as well as quality (qualification and trainability of the available labor);

- **Ports:** easy access to international traffic such as ports and traffic arteries;

- **Product market:** parks should also have the capacity of domestic market, access to the market and radiating capacity to the surrounding market;

- **Legal system of the park and the country:** in addition to their stability and perfection, the different regulations relevant to investment including land property rights, registration and approval of foreign investment, investment protection, outflow of profit, market access and limitations, custom supervision, tax, labor employment, social security and environmental protection of the country are fundamental to attract FDI. In addition, in relation to these, the park law is also crucial;

- **Special policies:** preferential policies mainly price of factors of production, tax exemption for a certain period or in the long-term are also important;

- **Initial position of the park:** the park’s initial conditions in relation to the capacity of land and infrastructure are important to provide conditions for market subjects to produce and operate in the park. So the park should at least make available these conditions to attract foreign enterprises.

Note that while foreign investment, especially FDI, can be a useful tool for economic development, the benefit from FDI depends on the kinds of investment made and how the host country government regulates it\textsuperscript{10}. FDI often benefits the host country in the short run. Accepting FDI unconditionally may actually make economic development in the long run more difficult. FDI may help economic development but only when introduced as part of a long-term development strategy. Thus, policies to attract FDI should be designed so that the FDI does not kill off domestic

\textsuperscript{10} It should be clear that Industrial Park is not primarily implemented to address all the advantages and disadvantages of FDI. Thus, all the theoretical and empirical evidences on FDI apply here. However, some of the issues outlined in this chapter can help to maximize its advantages while at the same time minimizing its disadvantages.
producers, while ensuring technology and managerial skill transferred to domestic businesses to the maximum possible extent. The experience of other countries reveals that it is necessary to regulate FDI, and that countries may reasonably decide to forgo short term benefits from FDI to increase the chances for its domestic firms to engage in higher level activities in the long run (See Box xx). It is also essential to note that while policy incentives are important to attract FDI, strict regulation may not necessarily prevent FDI from flowing, as observed from the experience of China and other countries.

<table>
<thead>
<tr>
<th>Box 1: FDI and the now Developed Countries</th>
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| Most now Developed countries regulated FDI when they were recipients. Sometimes, the regulation was draconian (e.g. Japan, South Korea, USA). Some countries like Singapore and Ireland succeeded by actively courting FDI but did not adopt a laissez faire approach towards Transnational Corporations (TNC).

Japan and Taiwan, are known for their pro–FDI policy and their success with export processing zones. Outside these areas, these countries imposed many restrictive policies on foreign investors. For instance, in Japan, not only was foreign ownership limited to 49% in 1963, some industries were banned to FDI. These restrictions allowed them to accumulate technological capabilities more rapidly, which reduce the need of EPZ in subsequent periods. They restricted foreign ownership shares, screened the technologies brought in by TNC, and imposed export requirements. Local content requirements were quite strictly imposed. South Korea was one of the least FDI dependent countries in the world until late 1990s, when it adopted neo–liberal policies. Taiwan, where policies were slightly milder than Korea, was more dependent on FDI though it was below developing county averages.

Germany, UK, France imposed performance requirement. UK adopted ‘voluntary restriction’ regarding local sourcing of components, production volumes and exporting. For example, when Nisan established a UK plant in 1981, it was forced to procure 60% of value added locally, with a time scale over which this would rise to 80%.

Singapore and Ireland, which succeeded by extensively relaying on FDI, used selective policies to attract FDI into areas that they considered strategic for the future development of their economies. Unlike Hong Kong, which had a liberal FDI policy, Singapore has always had a much targeted approach. Ireland also had a focused strategy that sought to attract FDI in sectors like electronics, pharmaceuticals, software and financial services. It also used performance requirement quite widely. |

2.4. Administration System of the Park
It is clear that the park should have its own administrative model that can actively adapt to foreign economic cooperation. If the existing administrative system of the country cannot ensure the smooth operation of the park, then the park should adopt a special administrative model, regardless of the administrative system the host country adopts. In the context of Park, administrative model combines the administrative main body and management system of the park. The key question is
‘what should a park’s administrative system look like?’. There is no generally accepted model of a park’s administrative system. However, there are certain key points that one should consider when deciding the administrative model or system of a park. These are briefly discussed as follows.

First, since introducing foreign investment is not a non-reimbursable assistance, the kind of a ‘cooperation disposition’ that a country takes – in plays a key role in designing the right type of the administrative system. In this case, an administrative system that considers rationality in economic cooperation, rather than making a stereotyped value judgment by ideology, is crucial. That means that one has to be clear that the type of economic cooperation in the park is a joint production business in which different owners provide their own production factors. This rationalism is reflected both at ‘legislation’ of the park and ‘managing’ the park. Thus, the economic cooperation is reflected in the agreement or contract, and if once this is done, then the park management should adopt an impartial third party stance to maintain the binding force of the legal contract or agreement. In addition, the rationality of the park management is also reflected in respecting the international practice, in which a market economy is implemented.

Second, efficiency and authority are the other key elements that need to be considered in designing the administrative system of a park. The efficiency of a park is crucially determined by the administrative structure, simplified and transparent procedures for handling routine affairs and qualified and incorruptible administrators. In relation to efficiency, it is also essential to provide adequate authority for the park administration to execute its management and operation efficiently. The authority of the park administration emanates from the nature of the administration structure and sources of power of the administrative agency. The power of the agency should be reflected in at least the following authorities: establishment of its internal organizational structure and operational procedures; planning its overall activities including land exploration, enterprise registration, budgeting and financing; enterprise supervision and administration, import and export, investment and financing for the construction of the park, etc; and coordination of state

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11 In the globalized world, Wank Kai (2013) states that ‘cold war confrontation is an extreme state’, ‘closing a country to international intercourse is a lifeless state’, ‘mutual prosperity is an ideal state’, and ‘economic cooperation is a rational state’.

12 In this case ‘rationality’ is the term used to underline the concept of making decision based on a clear thinking on ‘what problems do you want parks to solve?’, ‘what endowed natural resource endowments will be involved in collaboration? and ‘what things do you want to exchange in the cooperation?’
vertical management agencies such as security, custom, court, import and export commodity inspection and taxation, etc.¹³

Third, the type of administrative pattern of the park also determines the administrative system of the park. In the literature, there are at least three categories of administrative pattern: the enterprise – type - administration, quasi – government-type administration, and ‘real’ – government – type administration. Each type has advantages and weaknesses. In the first type of administration, the park is explored, constructed, run and managed by an enterprise independently. Enterprises within the park are supervised and run by another enterprise who created the park. Such parks can either be characterized by small size, enclosed by a city and do not have to build separate infrastructure system, but cannot completely carry out the management functions by themselves since there are certain functions that are beyond their control and managed by the government. The other types of parks with enterprise – type administration are those usually from other countries that the host country’s state provides a piece of land for development for certain years (usually for 99 years), and have a high degree of autonomy. Some of the advantages of the ‘enterprise – type’ administration parks are that they have reliable sources of initial investment, they are market – oriented park, highly simplified organization and have lower management cost and investment cost is born by the park itself. Their weakness include park owners’ economic objective may be different from government’s objective; after the park operates for long period, disagreement may be triggered in the responsibilities related to defects of the park and it is only market behaviour that dictates the park management, no other third party involve in arbitration. The host country also did not give the right to tax revenue to the park administration.

The quasi – government administration refers to the administrative main body with the following characteristics: the agency’s administrator is assigned and authorized by a higher level government (and has a regional administrative power) to implement regional administration on its behalf, and accountable for a higher – level government; it has the power to collect tax and establish a one level financing. It is ‘quasi’ because of the formation of park administrative main bodies, which is different from the formation of the standard and procedure of regional or local government stipulated by the constitution and government organizational law. The administrative

¹³ Note that there are cases where if the limits of authority of the park are not endowed by the state written laws, then the park is given special authority on cases arise along the course of its operation.
body of the park is accountable only for the higher-level government, and its legality depends on that of its higher authorities. In China, it is called park ‘administrative commission’. The key point in such administrative system is ‘efficiency’. Thus, its internal administrative structure should not necessarily be in conformity with that of higher level government. As the main function of the park is economic growth, its organizational structure should be streamlined though administrative business abutment should be taken into consideration in its internal organizational structure. Thus, the quasi-government system expedites the merging of relative organs of state in a massive reform. That is, a streamlined organs of the state, simplified procedures together with centralized power and the notion conforms to the international practice, the efficiency and vigour of the park are fully presented in this administrative system. One of the key features of the ‘quasi-government’ administrative system is that its pattern is not stable, meaning that its power and authority may extend to larger peripheral areas with increase in its economic volume and its population.

Overall, either the ‘enterprise’ or ‘quasi-government’ administrative system is neither superior nor inferior to the other. The key point in designing an administrative system for a park is that which system can maintain the vigor of the system and keep the administrative system efficient.

Given the above features of administrative pattern of parks, the internal administrative organs of a particular park is essential for its effectiveness. This internal organ depends on the concept of establishing the park. In this case, the two most important issues to be considered are ‘What does the park produce?’ and ‘What does the park operates?’ These two issues determine the functional departments of a park, which also differ depending on the stage of the park. The functional departments for a park at its initial stage Box XX shows the functional departments for manufacturing and building a park. As it is indicated in the box, the main departmental functions required at the initial stages of the park establishment are

1. Functions related to park’s environment and production: functions under this organ include planning, land, construction and real estate. While the function of planning is

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14 Other key questions that need to be clear to establish the internal organs of a park are ‘What does the park do?’; ‘What does the park pursue?’ and ‘What are the values of the park?’. The answer for these questions may be clear if the others two are clear.
straightforward, the other requires a brief description about their role. The main functions of the land unit are to control the primary land marketing (land leasing), check and ratify land use certificate, supervise secondary land market (land transferring) and change land usage right. Construction function can be administration of the constructions inside the park including examination and approval of the design, environmental protection and safety of the construction projects bidding and tendering; approval of the construction and inspection of quality of construction. The other organ under the construction function is construction management. The two functions (construction and management of the construction) should be separated and supervise each other to avoid unclear responsibilities. In addition, the construction function including bidding, inspection and control and quality inspection can be subcontracted in the form of purchasing service to avoid unwieldy functions.

2. Public utility
3. Labor relation function
4. Environmental protection
5. Park security
6. Social undertakings function
7. Park order

While functions listed from 1 to 5 are quite necessary for the initial period of park development, the last two functions may be required as the scale of the park expands in its economic size and population.

2.5. Planning of Parks
Planning is one of the key functions of an industrial park. The first requirement to determine a park’s planning approach is to define its function. That is, it should first be clear whether the park is a specialized industrial park (e.g. a chemical IP, automobile IP) or a comprehensive industrial park. While planning in the first type of park is straightforward, planning approach for the later requires to have basic information on the types of industries or enterprises the park will be home to, the types of products produced and productivity. Once this is known, it is possible to plan the required infrastructure and facilities such as land, transportation, water, energy, logistics, residential facilities, etc. with the help of specific parameters. The other key issue in the planning
function is related to its economic planning and social planning. The economic development planning of the park includes land development planning, infrastructure construction planning and industrial planning. In such function, it is the industrial planning that leads the land development and construction planning\textsuperscript{15}. While it is difficult to formulate industrial planning, the most important step to address this difficulty is to take measures in choosing the starting industries to be placed in the park in the early period including the way to actively shape the industrial extension. That is, it is important to know the industrial chain and industrial group being formed in the park. The social development planning aspects of the park planning function consists of environmental planning, population planning and social undertakings. This part of the plan can be delayed until the park reaches a certain phase in which these components of the planning function is relevant.

2.6. Land Development of Park

The other important issue in park development is land development, which is the first step in park construction. Park’s land development is involves investments to produce commercial land, whose use value satisfies the conditions for production and operation of the enterprises entering the park. It includes land leveling, elevation and capacity treatments; roads including bridges and culverts; greening; pipe network infrastructure.

One of the most important issues in land development of a park is the risk associated with the \textit{realization} of land use value (risk related to ‘land development investment’) and \textit{transfer} of the developed land. The use value of the developed land is realized only when it is transferred to the end user, which is the enterprise. At initial period of the park, there is risk of realizing the use value of the land especially when the park has a predetermined function and the land is transferred to foreign firms with considerable uncertainty.

Therefore, in case of ‘land development investment’, to reduce the risk, it is essential to take strategic judgment in addition to considering the capital needed for development, which is

\textsuperscript{15} As the industrial planning has direct impact on the land and infrastructure development planning, it is essential to have clear information on the relationship between industrial planning and land development planning on the one hand, and the relationship between industrial planning and infrastructure planning. These relationships are technical and can be estimated. Secondly, since park planning is a system with its own formulation rules, whose logic and sequential relationships are objective, it is important to be done by the park management team with the support from a think tank or professional team.
always scarce\textsuperscript{16}. The experience of China shows that the cost of acquiring land at the initial stage is low but it adopted the rolling type of land development, in which with the growing of the park, more and more land under the planning is acquired and the land price is continually increasing.

In transferring the land, especially if land is constitutionally owned by the state, the risk can be minimized depending on the type of administrative system of the park. If the park adopts government or quasi-government system, then the land market has a primary market behavior, in which case, the park manages and controls the land market within the park on behalf of the government. Land transfer in park development has also a secondary market behavior, in which the land use right is obtained with payment of the enterprise to which the government granted use right certificate, which contains the \textit{land use term} and \textit{starting date}. In this case, since the legal person who is granted use right, can transact again to alter use right and can mortgage land use right, the government should supervise the land market. It should control the land transaction price, to avoid fraudulent practice\textsuperscript{17}.

In general, especially at the initial stage of a park, it is absolutely essential to give due emphasis on the land transferring process\textsuperscript{18}. This process is important because it is not only important for obtaining the ‘right’ use value of the developed land, but it is also crucial for attracting productive enterprises as well as its implications for land price difference within and outside of the park, especially when there is an imperfect urbanization condition, which lead to deviation between land transaction price and its value.

The other issue that is worth to consider in park’s land development is the irrational behaviors that may occur in land transfer. This irrational behavior may happen as a result of the following.

\textsuperscript{16} For example, the pattern of land development could be in such a way that ‘plan a certain area, intensively invest at one time, calculate the cost using all reasonable parameters at one time, transfer separately and recover the investment after completing the transfer’.

\textsuperscript{17} Experience shows that the retransferring price of land could be lower or higher than the first transferring price. In cases where it is lower, the government has priority to transact, on the other hand, if it is higher, the excess should be levied business income tax.

\textsuperscript{18} The experience of China shows that for the first batch of industrial parks, which had a quasi-government/government administrative system, the preferential policy adopted by the government allowed enterprises to retain the fiscal revenue of the park for 10 years. Because this created better capital circulation, it is considered as one of the key factor for the success of park development in China. It is highly recommended to conduct detail study on the land transferring process and its implications for attracting the ‘right’ productive enterprises and obtain the ‘right’ use value of the land, which has a big implication for capital circulation.
First, eagerness to fast development may yield rent-seeking behavior of depressing the price of land by investors or park itself. This occurs when the host country is eager for development or the park owner faces with fierce competition. These two conditions may even result in zero price of the land, which is harmful both to the park and the country because it is transferring the risk to the park and requires long term investment with a long back pay period, which has uncertainty in it. There may be a reason to low or zero land price if and only if the park or host country is hoping to earn revenue from the enterprise using the land from tax revenue or recovering the land investment from the capital circulation as a result of the enterprises investment in the host country. The other risk from low or zero land price is that it is closely associated with connivies at fraud, which comes from the transfer of land at zero price on mortgage. In this case, if the enterprise fails or leaves the park/country, then it is the bank which owns the land, which results in huge loss of the park. Such risk is observed in government – Type Park but not in enterprise – Type Park, in which it impossible to transfer the risk to other body.

Second, irrational behavior can also be observed if there is no close supervision in using the land the enterprise has the right to for mortgage. In this case, restriction and regulation is required otherwise it is inevitable that there will be fraud and business without capital\(^{19}\). The mortgage of land use right is a normal business behavior without risk only if the enterpises have paid all land transfer fee.

The other source of irrational behavior is when the enterprise converts the developed land into stock shares to establish a joint venture so as to share the risk associated with realization of land investment. This behavior is usually observed in parks developed and managed by enterprise. While forming a joint venture by selling share is a normal business, the approach may be a source of irrational behavior which resulted in delaying of the land development and even that the land may end up with a non–performing asset. In addition, if the joint venture fails to perform well, the park has to take the joint liability. Generally, it is not wise to use to price of the land as share in

\(^{19}\) The experience of SEZs in China revealed such irrational behaviour. Some parks lost the land asset completely to banks when enterprises that collateralised the land use certificate they have obtained for free at market price to get loans with limited liability after bankruptcy faced foreclosure. The worst case is seen when foreign enterprises run away without any investment after maliciously getting mortgaged loans by the land they get at zero price. Dispute also arose when an operator who obtained rent-free privileges for two years sublet the space at higher price for five years for other operator.
the cooperative corporation and expect to recover land development investment with operating profit\textsuperscript{20}.

2.7. **Infrastructure Development of Parks**

Infrastructure development of a park is one of the key components in park development. The reliable, adequate and stable supply of infrastructure is a precondition for its survival. Thus, the key issues in the infrastructure development of a park are related to the investment for *production and supply* of public products, and *the recovery* of the investment. At the heart of these, the key concerns are the *construction and management* of the park infrastructure. While the administrator of the park is to the construction of the infrastructure, the enterprises placed in the park are the consumers of the infrastructure. Since the construction of infrastructure requires huge investment, the park should make a wise decision in choosing an investment and financing mode that suits its actual situation, which is mainly determined by its purpose, administrative system, overall macroeconomic situation (e.g. plan for infrastructure development) and enterprises placed within the park. Besides, it is important to know that part of the construction of infrastructure is also related to land development. Finally, it is also essential to have a clear understanding of the management right (and pricing right) of the park on infrastructure since such rights determine the operation model of the infrastructure, which is crucial for reliable and stable supply of the infrastructure\textsuperscript{21}.

2.8. **Regulations and Policy System of Parks**

**a. Legal framework of a park**

\textsuperscript{20} The experience of China shows that it is possible to avoid risks related to land development of park. The experience for Tanjin Economic – Technological Development Areas (TEDA) became commercially visible with the help of certain policy support from the state together with a model of indebted development and rolling development of the land. During the start of the development of the TEDA, the state funded the development areas in the form of loans of limited amount in the form of soft loan and part of it at market commercial loans. The state also later converted the loan calculated with compound interest to cleaning the interests with the principal only and TEDA stopped paying the interest to avoid the debt burden of compound interest. The preferential policy granted by the state was that the fiscal revenue within 10 years can be saved for itself.

\textsuperscript{21} For instance, in relation to the property right (management right and pricing right) of infrastructure, the experience in China shows that the park invests in part of the supply system construction of electric power. In this case, the Park invests in transmission, distribution and transformer substation independently and supplies power in a bulk sale manner. The main grid views the park as a major user and then the park supplies power to the enterprises. The advantage is that the property right and the management belong to the park. The disadvantage is the price of power is higher because of extra link.
Park legislation is the basic condition for its establishment and to ensure its normal operation. It provides the management main body, the enterprises and the stakeholders with common codes of conduct, and provides mandatory, authoritative written offers for all sides once disputes occur. The basic issue in park legislation is that *no matter what the socio–economic system the hosting country implements, the legislation of the park law should follow the current international codes for economic operation.*

Based on their hierarchy, the legislation of the park can be divided into three levels: federal level, local (regional) level and park level. The federal level legislation is the supreme park law and reflects the most sensible ideas of the country. This is the industry Park Proclamation 886/2015 in Ethiopia. Other prior law such as (foreign) investment law, etc, if exists, are also legal guarantee of the park.

At local level, the legislation can take two forms, depending on the country’s governance system. First, if the country is a decentralized system in which local states have a constitutional right to form a law, then the local state can legislate for the park. The second form is that if the country is just opening up its economy to foreign countries and it uses the park for experiment, then the country can authorize the local state the power to legislate for the park when the country has no unified legislation for the park. It should be noted that special instruction and authorization should be marked in article of the law, if the local regulations are special and conflict with the country’s higher level laws.

At park level, it is the management main body that is responsible for the administrative issues of the park. This body cannot legislate law. An upper–level organ is needed to make the law. However, if the upper-level law is not completed (which is a common situation) because the laws cannot list all the rules and procedures in practical operation, then the park’s administrative body can formulate implementing rules or temporary provisions for law–related affairs so as to ensure the smooth operation of the park. However, these rules cannot be referred to in judicial process since they are only normative documents and inadequate legal effect.

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22 A good example for Park law is *TEDA Regulation*, in China, which was enacted in the form of local laws in July, 1985. In China, various kinds of economic parks have been established since 1984, which have been operating over 20 years through economic cooperation with foreign countries yet there is no state level park legislation until now. The validity of the parks is confirmed only by provincial level local legislation.
Overall, a number of issues are important to be considered in formulating the legal system of a park. To discuss all these issues is not the scope of this study. However, it is essential to at least mention few of them that are fundamental for the successful implementation of Industrial Park development. These are briefly discussed as follows.

The following points are main principles for formulating legal system of a park:

- All parks involving foreign affairs implement systems different from domestic system. Any special policy which is different from the rest of the country’s legislation should be specified in the first level laws and regulations. For example, in China, the labor contract system universally adopted for park labor is fundamentally different from the mainstream employment system of China’s planned economy at that time. This law later became a state labor contract law in 2008.

- To ensure the smooth operation of the park, the law should focus on main economic activities by giving due emphasize to elements of production including land use, capital access and labor relations.

- Most standard regulations and procedures that are used to handle specific matters of the park belong to the administrative management of the park and are normative documents, and thus, are Park Laws. For example, procedures for selling and transferring of land, setting price of land in the park, rights and obligations of both sides of the transaction, etc are required to be mentioned in the normative document, i.e. of the rights of foreign enterprises over the land transferring or sell with payment, which is a federal or local law.

- The park should have the ‘authority’ to independently exercise administrative jurisdiction in certain geographical or planning scope.

The legal system of a park has at least four basic contents. These include park regulation, enterprise registration regulation, park land management laws and park labor management laws. Each of these regulations requires detailed investigations on the contents and forms so as to identify issues specific to Ethiopia, and address them for the effective operation of the park.

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23 Park law or regulation is the basic law for the park’s establishment and the mother law the park depends on for survival (federal law); Enterprise registration regulation of the park is required to regulate the capital (especially the foreign capital) access; Park land management law is required to clarify park land system and regulate ways for land using; and Park Labor Management Laws is required to administer the basic aspects of labor working in the enterprises placed within the park.
While this is beyond the scope of this study, we would like to mention few points on the contents of a park regulation.

Among the different issues that have to be addressed within the park regulation, the following are basic:

- **Formulation of park law** according to the constitutions of the country that provides approval for park establishment, its total land areas and its four boundaries
- **Functions of the park**: The first issue that should be clearly specified in the park’s regulation is ‘functions of the park’. These include
  - the park’s allowance and encouragements for foreign enterprises to invest and operate in the park
  - means of investment and cooperation which can be either wholly foreign – owned, joint ventures or collaboration with domestic enterprises
  - the industry categories in which foreign capital is allowed and encouraged to invest, and the industries not allowed to operate in the park;
- **Land ownership**: ownership of the land, means of acquiring the land and who is allowed to own a land and on what terms
- **Park administrative agency and its functions**
- ** Preferential treatment of the park**: this may include benefits related to land, tax, terms of benefit

**b. Policy system of the park**
The policy system of a park is used to promote the development of the park. Therefore, it is essential to consider certain key issues that are crucial to realize the goal in designing the policy system of the park. Generally, the policy should have a clearly defined purpose, direction and instrumental function so as to serve its aim.

Main direction of policies that encourage certain achievements include, but not limited to, policies to encourage industrial investment, infrastructure investment, technological advancement, employment, export, environmental protection, technological research and development, talent attraction, etc. The key issue here is that one should give special attention to the accuracy of the policies to avoid ambiguity and conflict among the policies. In addition, the implementation of the policies should be closely monitored and analyzed if they actually meet their intended objectives.
2.9. Development Stages and Major Management Functions of Parks

Generally, a park’s operation and activities can be categorized into six major areas of management. These are land, overall park environment (infrastructure and park’s management system), industrial, capital, city and technology management. The emphasis given to each of these six areas varies according to the development stages of the park. At the initial stage of the park, which lasts from three to five years, management gives more emphasis on the development of land, infrastructure and the overall park’s management system including policies and regulations, investment promotion and the services provided to its enterprises as per the market economy principle. At initial stage the industry has not taken shape, and does not need more emphasis. Following its initial stage, the growth stage of the park starts and lasts for 15 to 20 years, during which industrial and capital management are the main issues for the park’s management.

After the park operates for 20 to 25 years, it is expected that there will be some substantial changes in its pattern as well as the international and domestic environment around it. Thus, the park needs transition and should upgrade itself so that it can effectively overcome the problems associated with the changes in circumstances. This stage is crucial for the effective transformation and upgrading of the park. The two key issues the park will confront are issues related city management and technology management.

Since a park is established with clear purpose and objective, it should also closely follow up its operation over time. In relation to its contribution to the overall economic situation of the host country, the following key indicators are worth to considering, especially if the park’s main objective is to attract foreign currency and technology transfer. These include trends in foreign capital investment, industrial production scale, type of foreign enterprises attracted, distributive share of wealth, capital – output ratio and strategic resources of the park (capital and technology).

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24 Various issues need to be considered in the industrial and capital management of a park. Some of the issues in the industrial management such as classification of enterprises, industrial chain, industrial cluster, trends, etc are worth to be explored so as to indicate the direction and contents of industrial management. It should be noted that capital management is important to manage the park’s capital and solve shortages, if any.

25 The transformation and upgrading of a park requires to have a clear understanding on a number of key issues that need to be scientifically explored. Some of the issues that need to be explored and requires clear understanding are the direction of transformation, what should be upgraded, how should we determine whether the park is in the process of transformation, etc.
3. Review of Special Economic Zones (SEZs) in China

3.1. Basic Concept of SEZs in China

Since China launched its “Open Door” reforms in 1978 as a social experiment, it has achieved an unprecedented “economic growth miracle” in human history. Its GDP has been growing at an average annual rate of more than 9 percent and its per capita GDP increasing from US$193 to US$3,263 within the last three decades. This remarkable economic growth is the result of the institutionalization of a series of bold reforms designed to ‘open’ its economy by China’s central government since 1978. Establishment of Special Economic Zones (SEZs) was one of the key reforms that were instrumental in driving China's economic growth. This section reviews the experience of China with respect to SEZs with the aim of identifying lessons for Ethiopia.

3.1.1. Political economy of SEZs in China

It is important to briefly describe the political economy reason for why China used SEZs as an approach to its open – door policy. In this respect, it is good to start with the fact that before almost four decades, China was a third world country. It was characterized by a social and economic system with low growth rate of the agriculture and industry sectors; a disproportional investment structure with an overemphasis of heavy industry (between 1952 and 1978 only 12% of total investment was in agriculture, 5.4% in light industry, but 54.3% in heavy industry); high population growth, very low education level and quality of the work force; and low energy supply and transportation capacity.

After the end of the so-called Cultural Revolution (1966-1976) with its devastating effects for the Chinese economy and society, the necessity for change was unquestionable. The serious debate was on the path that China need to follow for change. Finally, an approach that follows ‘a gradual societal change’ was proposed by Deng Xiaoping. This fundamentally new approach was outlined in his speech as follows:

. . . I am of the view that we should allow some regions, some enterprises, some workers and farmers, who because of hard work and good results achieved, to be better rewarded and improve on their livelihood . . . [T]hey will engender powerful demonstrative effects on their neighbours and lead people in other regions, work units to follow their examples. In this way, the national economy will wave-like, surge forward, with all the people becoming relatively well-off. (Deng Xiaoping as quoted in Xu and Chen, 2008, p. 14)

This new approach led to the possibility of a major policy change, based on the concept of a problem-oriented policy, rather than an ideology-based policy. The basic concept of Deng's
approach emphasised the role of the market, introduced new elements of family farming, shifted emphasis from heavy to light industry, and created the opportunity in opening up to the outside world (Howell 1993: 50).

Following this gradualist approach, China unveiled its wide-ranging reforms by launching its Open Door Policy in 1979. Subsequently, Chinese authorities decided to test the water by opening small segments of the economy. Hence, it established Special Economic Zones (SEZs), the precursors of its National Industrial Park, After studying the economic success of South Korea, Hong Kong, Taiwan and Singapore, which employed Export Processing Zones as a tool for their export – led growth strategies, the China established its own model of Special Economic Zones (SEZs) in four coastal cities in 1980. The four SEZs were established in Shenzhen, Zhuhai, Shantou and Xiamen. The first three SEZs are located in Guangdong province and the fourth is in the neighbouring Fujian Province. When the China’s authorities were establishing these four SEZs in these coastal cities, they were targeting direct foreign investment and manufactured exports as the catalysts for jump-starting China’s industrialization process.

With this background on the political economy of SEZs in China, we will discuss the different aspects of SEZs as follow including the concept of SEZs in China, their stages of development, policy preferences, institutional arrangement and their contribution to the economic development of China.

3.1.2. Definition of SEZs

The belief that SEZs could play a positive role in economic development was based on four assumptions, that they would: (1) overcome the common problem of limited resources by supporting large-scale investment; (2) foster incremental experimentation- and trade-based learning, supported by government policies; (3) attract FDI to promote export growth and generate employment; and (4) facilitate economic liberalization (including trade, financial, and institutional liberalization) through policy measures and in situ innovations (see Wei, 2000).

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26 This idea was the opposite of Mao’s position, which can be summarised as: regional and local self-sufficiency, rural collectivisation, central planning plus state control and ownership of industry, limited contact with the outside world and concentration on the development of heavy industry.
The Chinese definition of SEZ combines all of these characteristics, which can be observed from the Regulations of the People's Republic of China on Special Economic Zones in Guangdong Province from August 1980. Articles 1, 4, 9, 13 and 17 clearly shows the concept of SEZ in China. These are briefly discussed as follow.

**Article 1** Certain areas are delineated from the three cities of Shenzhen, Zhuhai and Shantou in Guangdong Province to form special economic zones [...] in order to develop external economic cooperation and technical exchanges and promote the socialist modernization program. [...] (BFAI 1986: 95)

This Article 1 illustrates that the SEZs have more aims than just opening up of the country to the outside world. Technology transfer and the support of the transformation process are also clear aims of SEZs in China.

Article 4 of the regulation clearly shows that SEZs are more comprehensive special zones than any other type of zones such as export processing zones. SEZs were not only focusing on manufacturing, they also intended to focus on the investment in agriculture, construction and even tourism. It also lays the foundation for linkages between the SEZs and the rest of the country, because joint ventures with domestic Chinese partners were intended so that the basis for a transfer of know-how to other parts of the country would exist.

**Article 4** In the special zones investors are offered a wide scope of operation, favourable conditions for such operation are created, and stable business sites are guaranteed. All items of industry, agriculture, livestock breeding, fish breeding and poultry farming, tourism, housing and construction, research and manufacture involving high technologies and techniques that have positive significance in international economic cooperation and technical exchanges, as well as other trades of common interest to investors and the Chinese side, can be established with foreign investment or in joint ventures with Chinese investment. (BFAI 1986: 95)

While article 4 lays the foundation for domestic linkage, Article 17 also further reinforced the relationship between the SEZs and the rest of the country. This article clearly shows that the government of China intended to create backward and forward linkages with SEZ through supply of resources and intermediate inputs.

**Article 17** Investors in the special zones are encouraged to use China made machinery, raw materials and other goods. Preferential prices will be offered on the basis of the current export prices of China's similar commodities and paid in foreign exchange. These products and materials can be shipped direct to the special zones with the vouchers of the selling unit. (BFAI 1986: 96)
The domestic market, which was one of the most attractive aspects for many foreign investors for an engagement in China, was not totally closed for products from the SEZs.

**Article 9** Products of the enterprises in the special zones are to be sold on the international market. If an enterprise wants to sell its products in the domestic market in China, it must have the approval of the Guangdong Provincial Administration of Special Economic Zones and pay Customs duties. (BFAI 1986: 95)

### 3.2. Categories and types of SEZ

In China, SEZs had a function of ‘window’ and radiator’. As ‘window’ function, they serve as a first step for foreign enterprises to enter the Chinese market in a more guaranteed investment atmosphere and could also collect information through this inside looking window. As a radiator, the SEZs served a function of creating linkages between firms in the SEZs and those in the rest of the country.

SEZs (Industrial Parks) have also undergone continuous transformation and upgrading since their establishment. The first four SEZs were established as an experiment, and operated under controlled environment. After a successful achievement of these SEZs, China established additional SEZs. The total number of national-level SEZs (Industrial Parks) is over 500 while that of total parks/zones is near 10,000. After 35 years of development, Chinese SEZs (Industrial Parks) have diversified into 3 categories, which include a total of 12 different types of parks/zones. The first category contains those Parks/Zones within Administrative Divisions. The second category is Customs Special Supervision Zones within Administrative Divisions. The third category is Administrative Divisions zones. Under each category, there are national, provincial and municipal levels SEZs. Table 1 shows the different types and numbers of SEZs in each category. The numbers of SEZs shown in the table are only national level SEZs.

Table 2 below shows the general characteristics of China’s SEZs in terms of their objective, incentives, physical features as well as social and infrastructure related facilities. Not all SEZs in china have all of these characteristics though the first four/five SEZs may share almost all when they are established. For instance, Shenzhen is more than just production bases for export trade. It is local governments, with a sizeable territory and population under its jurisdiction (See next section on report for field visit to China).
### Table 1: Categories and types of SEZ

<table>
<thead>
<tr>
<th>Category</th>
<th>Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parks/Zones within Administrative Divisions</td>
<td>Economic &amp; Technological Development Zone</td>
<td>215</td>
</tr>
<tr>
<td></td>
<td>Hi-Tech Industrial Development Zone</td>
<td>129</td>
</tr>
<tr>
<td></td>
<td>Border Economic Cooperation Zone</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Modern Service Industry Zone</td>
<td>30</td>
</tr>
<tr>
<td>Customs Special Supervision Zones within Administrative Divisions</td>
<td>Bonded Zone</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Export Processing Zone</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>Bonded Logistics Park</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Bonded Port</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Comprehensive Bonded Zone</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>Cross-Border Industrial Park</td>
<td>2</td>
</tr>
<tr>
<td>Administrative Divisions</td>
<td>Special Economic Zone</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>New Area</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>526</td>
</tr>
</tbody>
</table>

### Table 2: Characteristics of China’s SEZs

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Aims/incentives/features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic aims of SEZ</td>
<td>- Attracting foreign direct investment</td>
</tr>
<tr>
<td></td>
<td>- Emphasis on managerial and skill training</td>
</tr>
<tr>
<td></td>
<td>- Technology transfer</td>
</tr>
<tr>
<td></td>
<td>- Employment generation</td>
</tr>
<tr>
<td>Financial/legal incentives</td>
<td>- Relaxation of customs duties</td>
</tr>
<tr>
<td></td>
<td>- Fewer restrictions on profits transfer</td>
</tr>
<tr>
<td></td>
<td>- Lower company taxation</td>
</tr>
<tr>
<td></td>
<td>- Tax holidays</td>
</tr>
<tr>
<td></td>
<td>- Export oriented (not totally)</td>
</tr>
<tr>
<td></td>
<td>- restricted Access to local market</td>
</tr>
<tr>
<td></td>
<td>- Reduced environmental control (uncertain)</td>
</tr>
<tr>
<td>Planning/geographical features</td>
<td>- large Physical size</td>
</tr>
<tr>
<td></td>
<td>- have Specific designation of boundaries</td>
</tr>
<tr>
<td></td>
<td>- usually have Restrictions of goods and factor movements</td>
</tr>
<tr>
<td></td>
<td>- Physical site planning / delimitation</td>
</tr>
<tr>
<td></td>
<td>- Regional development objectives</td>
</tr>
<tr>
<td>Social and infrastructural features</td>
<td>- no constraints on labor/union organisations</td>
</tr>
<tr>
<td></td>
<td>- Social infrastructure for workers</td>
</tr>
<tr>
<td></td>
<td>- Cheap industrial sites in zone</td>
</tr>
<tr>
<td></td>
<td>- Residential facilities for overseas staff</td>
</tr>
<tr>
<td></td>
<td>- Recreation facilities for tourism</td>
</tr>
<tr>
<td></td>
<td>- Hotels included</td>
</tr>
<tr>
<td></td>
<td>- Retail facilities</td>
</tr>
</tbody>
</table>
3.3. Stages and Upgrading of SEZ Development in China

SEZ development in China has gone through three stages of development: exploration, expansion and reform stages. Each stage is briefly described as follows.

3.3.1. Exploration stage

The first stage is considered as stage of exploration and experimentation. This stage took ten years from 1980 to 1990. The main purpose of the establishment of the four SEZs at this stage was to facilitate broadly based, comprehensive development through attracting foreign direct investment (FDI), expand China’s exports, and accelerate the infusion of new technology. In addition, forward linkages with the world, especially through liberalization of foreign investment and trade relations with capitalist countries, and backward linkages with different parts of China, was very much the rationale for their establishment. As a result they were encouraged to pursue pragmatic and open economic policies, serving as a testing ground for innovative policies that, if proven effective, would be implemented more widely across the country. Selection of their location was also strategic in that were located in coastal areas of Guangdong and Fujian that had a long history of contact with the outside world through outmigration, and at the same time were near Hong Kong, Macao, and Taiwan. The choice of Shenzhen was especially strategic because it is situated across a narrow river from Hong Kong, the key area from which China was to learn capitalist modes of economic growth and modern methods of managing a bustling metropolis (Yue-man Yeung, Joanna Lee, and Gordon Kee, 2009).

After establishing the first four SEZs in coastal areas of Guangdong and Fujian in 1980 and using the successful experiences of special economic zones in the previous period, the central authorities of China created a variant of SEZs, called Economic & Technological Development Zone in 1984. The ETDZs represent a continuity and outgrowth of the Special Economic Zones, but were launched on a larger scale and with legal and economic innovations.

The ETDZs are substantially similar to the Special Economic Zones which were established in 1980 to attract foreign investment and technology. Similarity exists in the preferential treatment, regulatory and legislative framework, and administrative structure of the SEZs and ETDZs. The ETDZs differ, however, from the SEZs in several important respects. The most prominent one is the emphasis of the ETDZs on developing production enterprises and scientific and technological research institutions which directly influence China's industrial
modernization. Thus, preferential treatment in the ETDZ is available only for production enterprises, whereas the SEZ gives universal preferential treatment to both industry and services. Besides, they differ in scale. A comprehensive SEZ often consists of a much larger area (sometimes an entire city or province). That is, SEZ consists either of a whole city or province that is granted special financial, investment, and trade privileges. In contrast, ETDZ is situated on a smaller plot of land earmarked for industry and export-trade development – but also granted special tax and other privileges. Informally, the ETDZs are also called China’s national Industrial Parks.

In terms of their development, the first phase of development commenced in late 1984 and early 1985 and involved a total of twenty-one square kilometres, with a starting development area of thirteen square kilometres. The primary goal of this early stage of development was to build infrastructure and to provide energy and other basic public facilities necessary for the establishment of foreign investment. By September 1985, there were more than 100 foreign investment projects in the eleven ETDZs, an impressive number in light of the small geographical area of the ETDZs (People's Daily, Sept. 17, 1986 (overseas ed., in henry R. zheng, 1986). To date, there are 215 national-level ETDZ. The development of these ETDZ has been implemented in different phases since their first establishment in 1984.

The pattern of national ETDZs in various provinces, cities, autonomous regions and other open cities is expected to play an active role in implementing the strategy of developing the west, strengthening the economic cooperation between eastern and Middle Western regions and promoting the coordinated growth of regional economy. The state-level ETDZ is a relatively small piece of land carved up in the coastal cities and other open cities. However, it attaches great importance to improving hard and soft investment environment and adheres to the policy of "mainly developing the high-tech industry, focusing on industrial projects, absorbing foreign fund and building up export-oriented economy" to strive for a fast and sound development. Serving as "Windows and bases" in the fields of opening-up, capital attraction, export enlargement, hi-tech development and regional economy promotion, it now becomes a powerful engine in developing regional economy and plays an important role in adjusting regional economy and industry structure. As a matter of fact, The ETDZs have scored great achievements and become the hot places of foreign investment and main forces of export.
Like other types of SEZ, the ETDZs also enjoyed different policy preferences from the central and local governments. The central government provides small amount of interest subsidy for development loan as financial support. The central government’s policy support is more substantial in areas of economic management autonomy and the right to try our reform measures first. On the other hand, the local government provides different incentives such as tax breaks, foreign investment promotion, delegate approval rights, etc. The local government provides foreign investors support and convenience on financing, construction and simplified project approval procedures etc.

3.3.2. Expansion stage

The second stage of SEZ development is called expansion stage, which was implemented from 1990 to 2010. In this stage, the aim of the government of China was to expand the development of SEZ to other types of special zones based on the experiences gained in the first stage. The focus was on the development of Hi – Tech Industrial development zones, New Areas and Customs Special Supervision Zones.

The High-tech industrial development zones were first initiated by the Ministry of Science and Technology in the late 1980s. The main objective of the program was to use the technological capacity and resources of research institutes, universities, and large and medium enterprises to develop new and high-tech products and to expedite the commercialization of research and development (R&D). In 1988, the first HIDZ was established in Zhongguancun (Beijing). As of today, there are 129 state-level HIDZs in China.

The first New Area was set up in the beginning of 1990. The establishment of new areas were authorized by the State Council, it aims to deepen the experiment of comprehensive structural reform; create comprehensive platform for the outside world; also drive and integrate new growth pole of regional development. In October 1992, the state council established Shanghai Pudong New Area. It was designed as Shanghai international financial center and core functional area of international shipping center in October 2005, Tianjin Binjiang New Area was established. It was designed as the northern gateway to the outside world as well as the center of high level modern manufacturing industry, development and transform, northern international shipping and international logistics. In June 2010, the central government established Chongqing Liangjiang
New Area as the center of modern manufacturing industry, economic; financial; innovative base of upper region of Yangtze River. In addition to these, the central government of China established additional 11 new areas since 2001.

The development of new areas also enjoyed different policy preferences related to finance, land, tariff and tax. The financial incentives are related to financial cuts within specific period and use the saving capital to upgrade the new area. Land usage right could be gained by compensation, foreign merchants could undertake the development of land. Firms also enjoy tariff free for specific imported products and all exported products. Moreover, in relation to tax incentives, firms enjoy low corporate income tax; free turnover and industrial & commercial consolidated tax except for exported products, crude oil and refined oil. In 2013, the New Area accounted for 3.26% of China’s GDP.

The expansion of Customs Special Supervision Zones includes the development of different zones with specific functions and legal ground. These include bonded Zones, bonded Warehouses, Export Processing Zones, Bonded Logistics Parks, Bonded Port Areas and Comprehensive Bonded Zones. The bonded zones established with their own legal ground, function and characteristics by the State Council in June 1997. The legal ground provides clear procedures on customs control over bonded Areas. Their main roles include bonded warehousing, export processing & transit trade, for which a bonded policy is formulated that enables them to provide a unified management, comprehensive function and convenient custom clearance. With regard to bonded warehouses, two warehouses were promoted in China in August 1988 after Chinese customs joined in the “Kyoto Convention” and accepted the accessory contract of Customs Warehouse. The two bonded warehouses are Bonded Warehouse and Export Supervised Warehouse. They are the basic level of China Special Customs Supervision Zone and are authorized by the local customs. Bonded Warehouses are the warehouse that stores bonded goods and the goods without passing customs procedures. It includes public, self-use, and tailored version warehouse. On the other hand, export supervised warehouse stores the goods that passed customs procedures. It could also provide services such as bonded logistics distribution and negotiability value-added services. It includes export distributional and domestic transformation warehouse. As of February 2015, there are 880 bonded warehouses and 120 export supervised
warehouses in China. Bonded warehouses also enjoyed policy incentives including financial, land and tax.

Export-processing zones (EPZs) were created to develop export-oriented industries and enhance foreign exchange earnings by the state council in June, 2000. The first EPZ was inaugurated in Kunshan in 2000. So far, 60 EPZs have been set up in in 51 cities of 23 provinces (including autonomous regions and municipalities) in China. With regard to policy preferences, goods entering EPZs from Chinese territory will be seen as exporting, which will enjoy the export tax rebate policy. In addition, enterprises in EPZs purchasing equipment and raw materials produced in China will be seen as exporting, which will enjoy export tax rebate policy. Goods entering Chinese territory from EPZs will be seen as importing, which should go through relevant import procedures.

Bonded Logistics Park is approved by the State Council. It usually locates inside specific port district, which is close to a bonded zone. Bonded Logistics Park aims to integrate policy advantages of bonded zones and location advantages of ports. It also integrates different functions of bonded zones and ports with aim to fill in the gaps between them. Shanghai Waigaoqiao Bonded Zone was the first bonded zone that triggered the integration reform between bonded zones and port. Shanghai Waigaoqiao Bonded Logistics Park was the first bonded logistics park in China established in December 2002. So far, 8 bonded logistics park were approved including Shenzhen Yantian; Ningbo; Tianjin; Guangzhou bonded logistics parks, etc. they have four main functions including international transfer, international distribution, international procurement center and international enter port trade. Like other bonded zones, they also enjoyed policy preferences including financial, land, tariff and tax incentives. In 2013, the bonded zone accounts 0.39% total volume of foreign trade in China, with 0.44% of total export (USD 9.07 Billion) and 0.35% of total import volume (USD 6.2 Billion) in China. Of the total volume of foreign trade, 171.29 billion USD (4.42%) was traded through all Comprehensive Bonded Zones in china in 2012.

3.3.3. Reform stage

The third stage is a reform stage, during which China developed two main types of special zones including the Free trade zones (FTZ) and the Modern Service Industry Zone. The reform started in 2010 and is still going on. Free trade zones were set up to experiment with free trade before
China’s accession to the World Trade Organization (WTO). FTZs had three targeted functions: export processing, foreign trade, and logistics and bonded warehousing. Shanghai Free Trade Zone is the first state-level FTZ. Companies in FTZs are eligible for tax refunds on exports, import duty exemption, and concessionary value-added tax. EPZs are similar to FTZs but are solely for the purpose of managing export processing. FTZs are the preferred locations for companies involved in export-trading and processing, while EPZs are more advantageous locations for manufacturing companies that export most, if not all, their goods to locations outside China (ProLogis 2008).

3.3.4. Upgrading of SEZs
The upgrading of SEZs in China passed through different generations. Each generation has its own development objectives and design. At least four generation of SEZs can be identified. Table 3 shows the different generations.

### Table 3: Different generation of SEZ development in China

<table>
<thead>
<tr>
<th>Generation</th>
<th>Development objective</th>
<th>Planning/design</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>First generation</td>
<td>Boost employment • Promote technological advancement • Develop labor-intensive industries</td>
<td>Separated from residential area with low plot ratio and low density • Small-scale light industrial zones and multi-story factories near residential areas</td>
<td>Assembly processing industrial zones • Multi-story factory • Low density integrated plant</td>
</tr>
<tr>
<td>Second generation</td>
<td>Develop capital- and technology-intensive industries • Add more functions such as testing, R&amp;D and design</td>
<td>Industrial clusters • Living facilities in the zones • Specialized zones emerge</td>
<td>Silicon industrial zone • Medical industrial zone</td>
</tr>
<tr>
<td>Third generation</td>
<td>Focus on technology-intensive industries • Attract in the operational headquarters of multinational cooperation • Facilitate the development of local small and medium enterprises</td>
<td>New zones integrating both industry and service sector (plot ratio 2.0-2.5) • Build up a community spirit among residents, enterprises, research institutes and higher education organizations</td>
<td>Science and technology incubation area • Modern service zone</td>
</tr>
<tr>
<td>Fourth generation</td>
<td>Implement an innovative development strategy • Develop knowledge-intensive industries</td>
<td>Life-Work-Fun-Study • Plot Ratio 3.0-4.0; Building height 40m; coverage 65% • Develop a urbanized working environment with multiple functions • High planning elastic</td>
<td>Life &amp; Science Park</td>
</tr>
</tbody>
</table>
3.4. Institutional Arrangement of SEZs

When China adopted its ‘open – door’ reform in 1980, it was not only characterized by low economic standards, it was also featured as absence of transparent legal system, absence of the concept of labor market, banks, foreign exchange markets and modern infrastructure that are basics for modern business enterprises, to mention some of them. Accordingly, the state council had to also repair these deficiencies so as to persuade foreign enterprises to invest in china. SEZs were also used as oases for reform and modernity in these features. As a result, the establishment of SEZ and their development has led to the formulation of various regulations. This section briefly describes the institutional arrangement of SEZ in china including the legal framework, administrative structure and policy preferences that govern their establishment, development and operation.

3.4.1. Legal framework

After the establishment of the SEZs with the approval of the central government, the State Council issued interim regulations in the same year. This law governs the overall governance system of SEZs. It outlines the basic preferential tax treatment effective in the SEZs and prescribing the role of regional governments in the administration of the SEZs. In the regulation, regional governments are vested with discretion to regulate the SEZs mainly in the area of local taxes (Henry, 1987). Within the framework of the regulation of the central government, each provinces or city can also issue their own regulation. Accordingly, following the issuance of the central government’s regulation, the provinces, where the first four SEZs established, promulgated their own regulations in diverse areas including administration, taxation, land, labor, technology transfer, foreign economic contract law and enterprise registration

27 For instance, the city government of Guangzou, Guangzhou province, promulgated seven regulations on SEZ development, technology import, land management, collection of industrial and commercial taxes, matters related to inland association enterprises in the SEZs, registration and administration of enterprises in SEZs, labor and wage management in Enterprise in SEZ.

The law governing the SEZs consists of two systems. The first system encompasses the general national laws and regulations in the areas of contract, investment, foreign exchange control, tax and labor. The second system is made of the regulations specifically applicable to each SEZ.

In terms of the relationship between the national law and the ETDZ regulation, there are fundamental issues arise particularly when there is no harmony or no clear regulation between the two laws. In such circumstances, there are two different points. On the one hand, the national law states that, in the absence of such law, the law of the country that bears the ‘closest connection’ with the contract shall apply. On the other hand, as a special administrative region, each ETDZ may theoretically enact its own regulation in order to fulfil its basic policy purpose underlying the establishment of the special zone.

Special regulations govern the establishment, registration of business enterprises in SEZs and implementation of SEZs in China. These include, but not limited to, enterprise regulation, labor law, land law, import and export regulations. Enterprise regulation contains regulation on companies allowed to operate in SEZs. This regulation allowed Chinese state-owned and private companies, joint ventures (JV) and wholly foreign owned enterprises (WFOE) to operate in the SEZs. This law is mainly national laws though they are complemented by additional zone legislations. However, the SEZs were also allowed to develop their own legislation, which may differ in many respects from the legislation of the rest of China (Gensler, Yang and Li 1998).

Enterprise regulation for ETDZs is similar to SEZs. The only difference for ETDZs is that such regulations are tailored to fit the special regulatory structure of the ETDZ. Investors must file an application with the respective Administrative Commission to establish an enterprise in the

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29 Since most of the ETDZ regulations resemble the SEZ regulations promulgated in 1980 by the Guangdong Province government, we will briefly discuss the regulation for ETDZ.
30 This second regulation system applicable to each SEZ consists of three categories: First, the national regulations that allow special preferential treatment in the ETDZs, which constitute the foundation of the special legislative structure in the ETDZs and provide the legal basis for the emergence of many regional rules and regulations governing the ETDZs. Second, these are basic regulation for ETDZs which serve as constitutions for the Zones and differ from zone to zone. Third, each ETDZ has several separate regulations governing specific fields. In Guangzhou, for example, there are six special regulations governing technology transfers, land, tax, joint ventures with inland businesses, registration of enterprises, and labor.
31 For instance, the regulation of the Guangzhou ETDZ states that national law will apply only where the laws in the ETDZ do not have special provision (see Henry, 1987 Pp 6 – 7)
32 Many of these regulations were at the beginning specific to the SEZs and were later-on transferred to the rest of the country.
ETDZs. While the Commission alone has the authority to issue an approval for domestic enterprise, in the case of foreign enterprise, the approval process takes different forms depending on the size of the capital. For instance, the policy for Tianjin ETDZ, it is the Tianjin city government issue approval for foreign investment projects involving $30 million or less without obtaining further authorization from the central government (Wu Jinghua, 1985)\textsuperscript{33}. Others obtain approval from the Central Government. The forms of enterprises allowed in the ETDZs include wholly foreign owned enterprises, equity joint ventures, and contractual joint ventures.

With respect to the labor law, what is unique to SEZs was the law related to the special insurance given to the employer. The regulation provides the employer the right to be compensated if an employee quits his job before the end of the contract for the training costs. This avoids the danger for the enterprise to be used as a cheap training institution which was a major problem in the early years of the reforms. An additional regulation which benefits the export oriented enterprises and the enterprise with high-technology production is the upper limit of the extra wage costs. The Labor Service Corporation, a quasi-governmental entity, is a regulatory authority for labor affairs in the ETDZs. For an initial fee, the Corporation helps enterprises recruit employees, negotiate employment contracts on behalf of employees, and oversees social insurance and employee welfare matters. The ETDZ labor regulations usually allow enterprises to directly recruit employees through the use of exams, without the participation of the Labor Service Corporation\textsuperscript{34}. In addition to recruitment, the labor law contains regulations related to wage and resignation and dismissal of employees. While some ETDZ labor regulate law, others not.

\textbf{3.4.2. Administrative system of SEZs}

In 1984, the Central Committee for China’s Communist Party (CCCCP) and the State Council approved the establishment of the Office of SEZs under the State Council, which was the general coordinative body for all SEZs. It is based at the Ministry of Foreign Trade and Economic Cooperation. Figure 1 displays the administrative structure of the four original SEZs. The development of the SEZs is supervised by the provincial government of Guangdong and Fujian, which again are under the directive of the State Council. It is only in Shenzhen that the city


\textsuperscript{34} However, prior to the promulgation of the PEFI, foreign enterprises in ETDZ should obtain permission from the Administrative Commission before recruiting employees in this manner (Henery, 1987).
government is directly responsible for the development of the SEZ. As it can be seen from the figure, there is an administrative committee, which is under the control of the province and city government in each city where SEZs are established, that administers the SEZs. This administrative committee has been empowered with economic management rights and compatible administrative rights to run the SEZs with high efficiency, providing “One Stop” service to investors, and responsible for creating a good investment environment.

The main functions of the administrative commission is planning and organizing implementation; examining and approving investment projects in the special zones; registration of enterprises operated in the special zones; coordinate the working relation of bank, insurance, taxation, etc; administering labor matters; responsible for facilities; and supervising the implementation and enforcement of laws and orders in the SEZs. A special characteristic of the Chinese SEZs are the development companies. The task of the development companies are covered in the Regulations of the People's Republic of China on Special Economic Zones in Guangdong Province article 25 (Box x). These companies are a kind of state-owned conglomerate with very comprehensive responsibilities.

Figure 1: administrative structure of SEZs in China (Source: Henery, 1987)
Box 2: Responsibility of Development Companies of SEZ

Article 25 Its [the development company, C.K.] scope of business includes fund-raising and trust investment, operating enterprises or joint ventures with investors in the special zones, acting as agents for the investors in the special zones in matters related to sales and purchases with other parts of China outside the special zones, and providing services for business talks. (BFAI 1986: 96)

In addition to the responsibilities mentioned in Article 25 they have also the following functions:

- development of own joint ventures with foreign or domestic partners;
- get access to export markets for zone enterprises as well as for Chinese domestic enterprises;
- improvement of the infrastructure in the zone by founding construction companies and real estate companies;
- be intermediary for loans in foreign currency.

The ETDZs have also followed the general pattern of the SEZs administrative commission structure for their administrative system. As an illustration for ETDZ, figure 2 shows the administrative structure of the Tianjin ETDZs. Like the SEZs, the institutional administrative structure of the ETDZ has an administrative commission and business supporting institutions.

The Administrative Commission acts as regulatory authority of the ETDZ. The Administrative Commission generally consists of a chairman, a vice-chairman and several commissioners. In most instances, it also has a general accountant and a general economist. The Commission is organized and controlled by the city government of the ETDZ, and it exercises its power within the scope of authority delegated by the city government. The Commission is often given extensive quasi-legislative and administrative powers to govern the ETDZs. It is also empowered to formulate the development plan of the ETDZ, and, once the plan is approved by the city government, to implement it. The Commission has exclusive power to administer the basic business supporting services, public utilities and other public facilities of the Zone, and to set standards for fees and charges. The Commission is also responsible for the examination and approval of investment projects and the administration of export and import activities of the Zone.
The Commission exercises its authority through a variety of departments under its leadership. The number and names of these departments vary among the ETDZs, though they are substantially similar in operation. In the Tianjin ETDZ, for example, eleven departments or offices under the Commission are responsible for the daily, routine administration of the Zone. With regard to the business supporting institutions of the ETDZ, they are considered to be quasi-official in nature and independent business entities in their economic dealings. These institutions take the form of corporations and are set up by the city governments. They operate primarily in the areas of power and water supply, highway and site construction, housing, and communications. They also provide basic consultation and liaison services for both domestic and foreign investors. Consequently, they play a leading role in the development of the ETDZs and the creation of an amicable investment environment. Thus, the organizational structure of these business supporting institutions takes either (1) a general corporation with several supporting subsidiaries providing service in each specific area; or (2) a few independent supporting corporations each specializing in a particular field. The development companies believed to operate in a profit maximising manner (Henry, 1987). The Tianjin ETDZ has used the first type of structure. Figure 2 shows this type of administrative structure.

3.4.3. Policy preferences
The previous two subsections briefly describe the legal framework and the administrative structure designed for the successful development and operation of the SEZs in China. From the discussion we can see that not only that the SEZs are special in the regulation formulated from the rest of the economy and administrative structure, but also that certain SEZs (like Shenzhen SEZ) have been

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35 These departments include the Tax Bureau, the Bureau for Administration of Industry and Commerce, the Finance Bureau, the Policy Studying Office, the Personnel Office, the Budget and Accounting Office, the Office for Enterprise Management, the Planning Office, the Construction Quality Supervision Station, the Administrative Office, and the Economic Contract Arbitration Committee.

36 For example, the Shenzhen Special Economic Zone Development Company fully or partially owns 230 enterprises in 1989 (Bolz, Lösch and Pissulla, 1990: 115, as cited in Konstanz, März (2000). Of these total enterprises, 80 are in the industrial sector (mainly joint ventures with foreign partners), 25 in real estate development, 24 in the service sector and 19 in the tourism industry. In addition the development company in Shenzhen has shares in 29 companies abroad, has 83 joint ventures with foreign partners and 53 joint ventures with Chinese partners (including enterprises in the SEZ and ministries). This also demonstrates the impressive size of the Development Companies in the Chinese SEZs.
given greater political and economic autonomy. In addition to these two special elements of the institutional arrangements of SEZs, regulations related to special policy preferences are also crucial element of the institutional arrangement of SEZs which are used to attract foreign enterprises to invest in China. Preferential policies were used to encourage foreign firms to invest in SEZs. These policy incentives include, but not limited to, preferential tax treatment, inexpensive land use, labor law, rapid customs clearance the ability to repatriate profits and capital investments, duty-free imports of raw materials and intermediate goods destined to be incorporated into exported products, exemption from export taxes, and a limited license to sell into the domestic marketplace. See appendix for the incentives in these preferential policies. To attract skilled labor, China also provided policy incentives for the overseas diaspora, such as the provision of housing, research funding, subsidies for children’s education, and assistance in “Hukou” transfer, among others. See section four for the different preferential policies in Shenzhen SEZs, which is one of the first SEZs established in China.

3.5. Economic Contribution of SEZ in China

This section briefly discusses the economic contribution of the first five SEZs in China. The discussion is made in terms of their contribution to Gross Domestic Production (GDP), employment, international trade (export – import trade), firm structure and foreign direct investment. The contribution of SEZs to China’s economy is shown from table 4 to table 14.

3.5.1. Change in population

We start with the dramatic changes observed in these SEZs since their establishment (Table 4 and Table 5) between 1979 and 1997. The combined population of the five SEZs has increased from almost 10 million in 1979 to over 17.5 million in 1997, indicating an increase of 78% in less than two decades or 3.3% per year. The most striking change was observed in the population of Shenzhen which increased more than tenfold and thereby increased its share from 3% in 1979 to 22% in 1997. This corresponds to an annual increase in population by 15% per year.

Table 4: Population in the SEZs 1979-1997 (in millions)

37 For example, Senzhen SEZ has been given greater power to develop municipal laws and regulations, including local tax rates and structures, and to govern and administer these development zones. They were also permitted to cut special deals with foreign enterprises offering cheap, or “below-market,” lease rates for land or production facilities.

38 The discussion in this section is mainly drawn from Eingereicht von Claus Knoth (2000).
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Table 5: Population Shares in the SEZs 1979 – 1997

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3.5.2. Contribution to GDP

The contribution of SEZs to China’s GDP was substantial. A study by the World Bank shows that the five initial SEZs accounted for 5 percent of China’s total real GDP, 22 percent of total merchandise exports, and 9 percent of total FDI inflows in 2006. A more detailed investigation of the GDP contribution of SEZs is presented by Eingereicht von Claus Knoth (2000), and table 6 and Table 7 shows the economic contribution of the five SEZs in terms of their gross domestic production. Table 128 shows the steady increase in economic contribution of the SEZs to GDP of China. The tables reveal especially the rapid economic development of Shenzhen in 1985, Shenzhen has passed the other cities and produced more than one quarter of the real GDP of all SEZs. Over the whole reform period, Shenzhen grew 28% per year, Zhuhai by 18%, Xiamen 16%, Shantou 12% and Hainan only 9% annually. Overall, although the SEZs were growing rapidly, they increased their share in the real GDP of the whole of China only from 1% to 2%. It is noteworthy that the four cities despite this small overall size were able to produce 80% of this share.
3.5.3. **Structural transformation**

Table 8 shows the contribution of the SEZs in the structural transformation of the Chinese economy. As can be seen from the table, the share of the primary sector declined substantially, from 30% in 1980 to 19% in 1997. In Shenzhen, the share of real GDP produced in agriculture has fallen to just 1%. The share of secondary (manufacturing) and tertiary sectors increased from 21% and 42% in 1980, respectively, to 49% each in 1997, indicating a substantial change.

**Table 6: Real GDP in the SEZs 1997-1997 (billion Yuan)**

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<td>1,187</td>
<td>1,610</td>
<td>1,796</td>
<td>1,963</td>
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**Table 7: Real GDP Shares of the SEZs 1998-1997**

<table>
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<tr>
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<td>0.14</td>
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<td>0.26</td>
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In relation to value added as share of output, the SEZs show major differences (see Table 9). In Shenzhen, this ratio increased in agriculture in the beginning of the reforms from 50% to 57% and stayed in the range of 55% to 58% in the later years. In Shantou, it increased during the early reform years much stronger from 52% to 74%, but declined in the later 1990s to just 29%. In Xiamen, the ratio was much more stable and fluctuated on a relatively high level between 61% and 68%. These figures demonstrate the dramatic changes which have taken place in the production process, especially in Shantou. They show that the production processes are organised with major differences in the different zones. These figures display the intensity of the restructuring process in the 1980s in Shenzhen and Shantou.

Table 8: Sectoral Shares in GDP of the SEZs

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<th>1990</th>
<th>1997</th>
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Table 9: Share of Value Added in Total Production Value

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Table 10: Imports and Exports of the SEZs 1979-1997 [billion Yuna]

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Table 10 and Table 11 demonstrate the large changes which have taken place in the SEZs and in the whole of China with respect to international trade. Absolutely dominating with respect to imports and exports with shares of 65% and 69%, respectively, is Shenzhen. It is especially surprising how dominating Shenzhen in the early 1990s was, with shares of 80% to 90%. With respect to the share of the international trade of the SEZs in the exports and imports of the whole of China one should note that already at the beginning of the 1990s, the SEZs have reached a share of almost 20% and stayed at this level during the 1990s.
Table 11: Import and Export Shares of the SEZs 1979-1997 [%]

<table>
<thead>
<tr>
<th></th>
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<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
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</tbody>
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3.5.4. Contribution to foreign investment

The other contribution of the SEZs was in attracting foreign investment. The significance of the SEZs as a location for FDI is revealed by comparing the volume of foreign investment in the zones with the total FDI in the whole of China. In 1984, 371 mill US-$ of the total of 1.26 billion US-$ were located in the four SEZs. This is equivalent to 29%. In 1991, the volume of FDI in the five zones increased to 919 mill US-$, while the total FDI in China even increased to 4.4 bill US-$ (Tables 12 and 13). The share of foreign investment in the five SEZs was 29% of total China in 1984, which is after few years of their establishment. Half of all FDI in the five SEZs in 1984 was invested in Shenzhen, followed by Zhuhai with 34%. Over the years, these two SEZs lost their dominant position since the investment into the other zones increased faster. In 1992, Hainan even became the main destination for foreign investors. However, though FDI increased during the first few years of SEZs establishment, their share in the total foreign investment has been declining and reached 13% of total China in 1997. Perhaps, this could be the attraction of investors from different countries to different destinations. For example, Bolz, Lösch and Pissulla (1990) stated that western investors were more attracted by the old industrial basis, because they were looking
for a developed industrial structure with the necessary infrastructure and access to a labor market with qualified workers.

Tab. 12: Foreign investment in the SEZs 1984-1997 [mill US-$]

<table>
<thead>
<tr>
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<td>1660</td>
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<td>169</td>
<td>108</td>
<td>170</td>
<td>327</td>
<td>681</td>
<td>908</td>
<td>1024</td>
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<tr>
<td>Shantou</td>
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<td>28</td>
<td>58</td>
<td>131</td>
<td>105</td>
<td>160</td>
<td>896</td>
<td>987</td>
<td>1011</td>
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<td>242</td>
<td>173</td>
<td>133</td>
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<tr>
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<td>101</td>
<td>176</td>
<td>452</td>
<td>1055</td>
<td>790</td>
<td>711</td>
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<tr>
<td>Total SEZ</td>
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<td>389</td>
<td>847</td>
<td>862</td>
<td>919</td>
<td>1389</td>
<td>5264</td>
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<td>1.7</td>
<td>3.4</td>
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<td>11</td>
<td>37.5</td>
<td>41.7</td>
<td>45.3</td>
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Tab. 13: Foreign Investment Shares in the SEZs 1984-1997

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<th></th>
<th></th>
<th></th>
<th></th>
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<td>N.A.</td>
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<td>0.22</td>
<td>0.24</td>
</tr>
<tr>
<td>Hainan</td>
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<td>0.05</td>
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<td>0.12</td>
<td>0.19</td>
<td>0.33</td>
<td>0.20</td>
<td>0.13</td>
<td>0.12</td>
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<td>SEZ in China</td>
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<td>0.13</td>
<td>0.14</td>
<td>0.15</td>
<td>0.13</td>
</tr>
</tbody>
</table>


3.5.5. Negative experiences from SEZs

On the other hand, while the development SEZs resulted in substantial improvement in China’s economy, the country also faced with some negative outcomes associated with its SEZs development. The key negative lessons are:

- Disparities in income among regions due to selection of SEZs location: The pattern of SEZs development which focused more in the eastern region led to the unevenness in economic development and per capita income level among regions within China. These disparities are reflected in widening regional income disparities between coastal and inland; eastern and western as well as eastern rural and western and central rural.

- China was the recipient of outdated and backward technology.
- The value of foreign technology was greatly overestimated.
- China was the recipient of some of its own exported components as part of full production lines. In addition some components were locally available at a lower price.
- The Chinese side was undervaluing its contribution to joint ventures,
- The inexperience from China’s side not only resulted in the inadequate specifications of foreign-supplied equipment but it also increased cost of SEZs implementation and delayed project implementations.
- Chinese non-participation in foreign marketing resulted in profit loss and the failure to gain marketing experience.
- Joint ventures were proposed whereby foreign equity contribution would be limited to patent rights transfer, while the Chinese side was to be responsible for cash contribution plus operating capital guaranteed by the Bank of China.
- Technology transfer was not achieved at the initial stages. First, most of the foreign investments were made on labor intensive sectors that require low skills and mainly in simple assembly and processing plants (producing simple goods like toys, textiles, and plastic flowers). Secondly, western investors were more attracted by the potentials of the huge domestic market and wanted to develop a foothold in the economy. The third reason for not transferring modern technology is the limited availability of qualified labor. China expected that it would be easy to learn from the use of the modern technology in projects with foreign participation and to transfer it to other domestic enterprises. But the Chinese side learned fast that the transfer of technology, either as direct transfer or as spill over to domestic enterprises is a complicated process which requires a basic level of human capital in the domestic enterprises

3.6. Success Factors and Challenges in SEZ Development

   Major factors for success can be summarized as follows:
   - Strong commitment to reform and pragmatism from top leadership
   - Preferential policies and institutional autonomy
   - Strong support and proactive participation of governments
   - Foreign Direct Investment and the Chinese diaspora
   - Technology learning, innovation, upgrading, and strong links with the domestic economy.
- Innovative cultures.
- Clear objectives, benchmarks, and intense competition.
- Location advantages.

The key Challenges that SEZs faced are:

- Moving up the global value 
  chain: many SEZs and firms are also seriously constrained by limited innovation capacity and a shortage of skills. Because economic competitiveness increasingly hinges on knowledge, technology, and innovation, how to move China’s industries to the high value-added sectors (including services) is a real challenge.

- Environmental and resource constraints: related to China’s growth model based on low technology and labor- and resource-intensive manufacturing, many SEZs and clusters face serious environmental and resource challenges. With the increasing emphasis on climate change, two aspects related to environmental challenges call for particular attention: one is serious water, air, and land pollution and the huge amount of industrial waste; the other is the increasingly tough eco-standards set by industrial countries for products exported from developing countries. These include RoHS (Restriction of the Use of Certain Hazardous Substances), WEEE (Waste Electrical and Electronic Equipment), and EuP (energy-using products).

- The diminishing of the preferential policies and privileged status: after China’s WTO accession in 1992, these advantages were further diluted. How they can continue to attract investment, especially FDI, in an environment of enhanced competition could be a challenge for them.

- The homogeneity problem: Many of the SEZs or industrial parks now competing in the same or similar sectors lack conspicuous sector or product differentiation. While a reasonable level of competition is good for innovation and growth, too much competition across the country might lead to a waste of public resources, because almost all the zones or parks are government sponsored. It would be more desirable to concentrate the same, similar, or closely related sectors in a few locations where they have the best comparative advantages.
3.7. Summary

The establishment of Special Economic Zones (SEZs) is one of the first key policy measures taken by Deng Xiaoping’s government in the decision leading to the opening up of China in 1979. Two main reasons appear to drive the decision to set up SEZs. First, in the late 1970s, China lacked foreign currency and relied on rudimentary technology in the industrial sector. It thus was in a desperate need of interventions that can both attract FDI and help upgrade local technologies. Second, prior to the advent of SEZs, China had been a communist state where the ownership of nearly all productive resources and the decision how to use them were highly centralized with barely any private enterprise. Before the opening up policy was rolled out nationally, the experimentation of new laws and regulations in a small yet more controlled area was thus taken as the first concrete step to garner more public support for the reform agenda with the notion of “Socialism with Chinese Characteristics”. The initial batch of SEZs presented a form of litmus test for the feasibility of reform and opening up. SEZ were thus considered as tools that can generate dual benefits by attracting FDI and also by acting as a pilot for the opening up policy in a geographically restricted area or enclaves.

It is true that SEZs contributed substantially to the miracle economic growth achieved in China. The experiences of China in SEZs development can be a rich laboratory to other developing countries including Ethiopia. This section presents the basic concept that drives the birth and different generations of SEZs. It also briefly describes the general overview of the implementation mechanisms used along the process of implementing SEZs. The effectiveness of its implementation has also be seen from the economic contributions of SEZs as well as the success factors and the challenges that the Chinese confronted along the process. Therefore, important lessons can be drawn from the historical development of SEZs in China. However, before drawing the important lessons, it is also important to assess what has been done on the ground especially at Industrial Park level in SEZs. In addition, though the experience of SEZs can tell a lot for late comers like Ethiopia, it may not give the required lesson. Thus, we also tried to review the experiences of other countries. The next section will present the experiences at Park level in China and other selected countries.
4. Review of Selected Parks in China and Other Countries

This section briefly reviews the experiences of Industrial Park development in other countries and the visited Parks in China including Shenzhen and Suzhou SEZs.

4.1. Shenzhen Special Economic Zone

This sub section presents a brief review of the Shenzhen Special Economic Zone, one of the first five SEZs established in China.

4.1.1. The establishment of Shenzhen as a SEZ

In April, 1980, the Guangdong province requested the central government to establish SEZs in Shenzhen, Zhuhai and Shantou, areas bordering the SARs. Within six months, the central government endorsed the Act of Guangdong SEZ, approving the province’s request to set up SEZs in Shenzhen, Zhuhai, Xiamen and Shantou. The decision was made by the Central Committee of the Chinese Communist Party (CCCCP), the highest authority in China, and the state council, suggesting high level approval and endorsement by the political establishment. This culminated into the “The Regulation on Special Economic Zone”, which defined SEZ as “an area where enterprises are treated more preferentially than in other areas in relation to such matters as the tax rate and the scope of operations in order to attract foreign capital and advanced technology for modernization” (Chen, 1994, 1995).

Consistent with the objective of opening up and attracting FDI, the first four SEZ was established in areas bordering the Special Administrative Regions (SAR) of China, namely Hong Kong, Macau, and Taiwan. Of the four SEZs, Shenzhen was initiated first. Shenzhen is located in Southern Guangdong province bordered by Hong Kong to the South and Huizhou to the north and Dongguan to the north and northwest.

In late 1970s Shenzhen was a village inhabited by about 30,000 fishing communities. It was elevated from a county level city to a prefecture level under the Guangdong province in 1979. Its selection as SEZ in 1980 meant that it was granted with high level of economic autonomy and administration which effectively put it in par with semi-provincial level decision making power.

Ng and Tang (2004) present a summary of several plans that were initiated to transform Shenzhen into an industrial production hub, which is replicated in Table 1. The authors divided
the planning periods into three phases, building an SEZ, export orientation and economic restructuring and transforming the Shenzhen into world-class city.

In the first phase, spanning the period from early 1980s to mid-1980s, planning to build an SEZ involved delineating the geographical area of the SEZ and preparing a master plan for the development of the area. The initial plan designated area of 327.5 square kilometers for the development Shenzhen SEZ. In 1980, however, less than 3 square kilometers of this land was actually developed. The geographically delineation of Shenzhen as an SEZ was completed with the erection of 84.6 km fence separating Shenzhen from the rest of China (Yee, 1992).

In 1982, the local economic planning commission drafted Shenzhen Social and Economic Outline Plan. According to Ng and Tang (2004), the plan had three major components: 1) selecting tourism, manufacturing, agricultural production, commercial and real estate development to be major sectors to be accommodated in Shenzhen SEZ, 2) Industrial growth “focusing on high-tech and capital intensive” industries would occupy the center stage in the SEZ., 3) Commercial food production for Shenzhen and Hong Kong through agricultural growth in the SEZ would be ensured.

Table 15. Socioeconomic and Spatial Plans in Shenzhen

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</tr>
<tr>
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<tr>
<td>1981-1985</td>
<td>Sixth Five Year plan</td>
</tr>
<tr>
<td>1982</td>
<td>Shenzhen Socioeconomic outline plan(SSEOP)</td>
</tr>
<tr>
<td>1982</td>
<td>The First Master Layout plan</td>
</tr>
<tr>
<td><strong>Phase 2: Mid-1980s to Mid-1990s</strong></td>
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<tr>
<td>1986-1990</td>
<td>Seventh Five –year plan</td>
</tr>
<tr>
<td>1986</td>
<td>Second Master Layout Plan</td>
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</tbody>
</table>

Phase 3: Mid-1990s onward

- Planning control extended as Longgan and Bao’an Counties were turned into Districts within the Shenzhen Municipality in 1993 (and towards Shenzhen SEZ in 2010)
- A need to reinvent Shenzhen in the face of mounting competition within China and in the global economy

1993        Review of Master Layout Plan started
1995        Municipal Government approved the outline for Modifying the Shenzhen Master Layout Plan
1996-2000   Ninth Five-year Plan
1996        Draft Third Master Layout Plan
2000        Third Master Layout Plan approved by the State Council
2001-2005   Tenth Five-Year Plan

Source: Mee Kam Ng and Wing-Shing Tang (2004), page 196.

The second phase, spanning the period from 1986 through early 1990, had the major planning ambition on export-orientation and economic restructuring. At this period, export promotion was at the forefront of the National Seventh Five year plan (1986-1990), which aimed at increasing export from 563 million USD in 1985 to 1 billion in 1990 from Shenzhen SEZ (Ng and Tang 2004). As shown in Figure 2, in 1990, Shenzhen SEZ’s performance by far surpassed the projected figures set in the Seventh Five year plan. Export, for example, reached an astonishing 8 billion, which is 8 fold higher than the planned amount.

Figure 2. The Seventh Five year plan Targets of Shenzhen SEZ and actual outcomes

Source: Author’s compilation from Ng and Tang (2004), page 200.

In the third phase, from mid 1990s onwards, the planning for Shenzhen SEZ has moved from labor intensive manufacturing to “building Shenzhen into a world-class city” (Ng and Tang,
2004). Such planning entailed the expansion of the high-tech industrial sector, Research and Development and the tertiary sector such as, information services, banking, insurance and human resource development in Shenzhen SEZ. Under the third phase, Shenzhen was to be transformed into a “city with the environment of Singapore and the efficiency of Hong Kong” (Ng and Tang, 2004).

4.1.2. The economic structure of Shenzhen SEZ in 1980s and 1990s

As shown in Figure 3, in 1980s, the contribution of the primary sector, industrial and construction sectors were 12%, 18% and 20 % in Shenzhen SEZ respectively. In the 1980s, the lion’s GDP share was surprisingly contributed by the tertiary sector, which accounted for 50% of the total GDP of Shenzhen SEZ. Higher share of the tertiary sector was mostly because of the boom in real estate business after the designation of Shenzhen as an SEZ. Figure 2 also shows that the industrial sector has gradually expanded over time its GDP share peaking to 47.5 % in 1988. The share of the industrial sector has expanded with annual growth rate slightly higher than 6 percent. The rapid expansion of the industrial sector in the 1980s is mainly driven by growth in light labor intensive manufacturing industries including textile, processed food, machinery, construction materials and electronics (Ge, 1999). The GDP share of the secondary sector that combined industry and construction has also grown from 38 percent to 56 percent in Shenzhen SEZ in a span of thirteen years.

Figure 3: The economic structure of Shenzhen from 1980 to 1993

![Figure 3: The economic structure of Shenzhen from 1980 to 1993](image)

In 1988, industrial production has occupied more than 20 square kilometers of land in Shenzhen SEZ. As Shenzhen SEZ developed, land and labor costs started rising rapidly. Increase in production costs coupled with intense competition from other regions made light labor intensive manufacturing unsuitable in Shenzhen SEZ. By 1994, the area of land under industrial use has thus declined to 14 square kilometers (Ng and Tang, 2004). Gradually, however, other sectors in Shenzhen SEZ have expanded to utilize all the land that is allotted to it. By 2010, the total land area under Shenzhen SEZ has reached nearly 396 square kilometers. In July 2010, China’s state council decided to incorporate Shenzhen’s city's Baoan and Longgang districts into the SEZ drastically expanding Shenzhen SEZ’s designated area to 1,953 square kilometers (Xinhua, 2010).

4.1.3. The transformation of Shenzhen: main success factors

Shenzhen has reached an economic might in a span of a few years. Starting from a low base, Shenzhen experienced an impressive 75% annual growth in GDP between 1981 and 1984. Except for low rates of growth observed in 1985 and 1986, the GDP of Shenzhen SEZ continued in its high growth trajectory. Indeed, the annual average growth rate between 1981 and 1993 was 40%, a rate that is higher than the national annual average GDP growth rate in the same period by more than thirty percentage points (Ge, 1999).

From the outset, however, it was not always clear that Shenzhen SEZs would be the success that it is today. Major contributors to this success are: i) the ability to mobilize resources for the construction of a wide array of industrial infrastructure and amenities, ii) the capacity to attract FDI, and iii) autonomy, decision power and managerial flexibility. We will expound on these factors in detail below.

i. Resource Mobilization:
The most obvious challenge in setting up Shenzhen as a Special Economic Zone was securing adequate level of resources to finance massive infrastructure investment required to transform Shenzhen’s agricultural and uninhabited land into industrial land. There were limited local capacity to finance infrastructure-build up in land leveling, road, railway, communication and power station construction as well as factory and related amenities buildings in the late 1970s and early 1980s. To overcome the financing shortages, a multitude of measures were taken as indicated in Table 16. The measures are: state appropriation, attracting FD, Self-raised funds, loan from domestic sources, and other funds.
Table 16: Funding sources for Shenzhen SEZ; percentage of share of total investment

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<th>Source of Funding</th>
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<th>Domestic loan</th>
<th>Other Funds</th>
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<td>13.7</td>
<td>57.7</td>
<td>18.6</td>
<td>8.4</td>
</tr>
<tr>
<td>1986</td>
<td>2.7</td>
<td>18.6</td>
<td>50.1</td>
<td>13.9</td>
<td>14.8</td>
</tr>
<tr>
<td>1987</td>
<td>1.3</td>
<td>16.7</td>
<td>55.5</td>
<td>17.5</td>
<td>8.9</td>
</tr>
<tr>
<td>1988</td>
<td>0.8</td>
<td>15.3</td>
<td>49</td>
<td>15.8</td>
<td>19.1</td>
</tr>
<tr>
<td>1989</td>
<td>0.3</td>
<td>32</td>
<td>45.3</td>
<td>11.8</td>
<td>10.6</td>
</tr>
<tr>
<td>1990</td>
<td>0.5</td>
<td>34</td>
<td>34.3</td>
<td>22.5</td>
<td>8.7</td>
</tr>
<tr>
<td>1991</td>
<td>0.3</td>
<td>23.6</td>
<td>36</td>
<td>29.9</td>
<td>10.2</td>
</tr>
<tr>
<td>1992</td>
<td>0.0</td>
<td>11.8</td>
<td>43.6</td>
<td>30.7</td>
<td>13.9</td>
</tr>
<tr>
<td>1993</td>
<td>0.0</td>
<td>12.9</td>
<td>51.2</td>
<td>19.8</td>
<td>16.1</td>
</tr>
</tbody>
</table>

Source: Ge Wei (1999), Special Economic Zones and the Economic Transition of China.

A. State appropriation or direct capital injection: There was a direct capital injection from the central government to the local government to help set up Shenzhen SEZ in the form of budgetary support. In the 1980, the share of capital from the state budget to Shenzhen SEZ was about 24%. While this appears to have generated a significant pressure on Guangdong province’s budget, it still remained small to finance the large-scale infrastructure investment needs of Shenzhen SEZ. For example, when Shenzhen was set up as SEZ, it only got roughly about 30 million USD from the central government. This amount, however, was deemed too low to meet the financing needs of the infrastructure investment in the SEZ; this money was mostly used to delineate the geographical area of the zone and to put up fences separating the SEZ from the bordering area. As indicated in Table 2, state appropriation as a source of SEZ financing averaged less than 5% in the first 10 years between 1980 and 1990. Its significance further declined in the 1990s with a percentage share of Shenzhen SEZ investment becoming zero from 1992 onwards.

Figure 4 shows a broad categorization of investments in fixed capital formation in Shenzhen SEZ from 1979 to 1992. Capital investment in Production included investment projects in industry, service and agriculture as well as projects in communication and transportation...
facilities. Non-production fixed capital investment included projects in residential and administrative unit, education, health and entertainment facilities.

**Figure 4. Fixed capital investment in billions of Yuan in Shenzhen SEZ over time.**

As seen in Figure 3, at the early stage of the Shenzhen SEZ development, investment in non-production fixed capital formation was slightly higher than production investment. This is explained by high level of investment in residential units owing to the lack of adequate number housing facilitates for both local and foreign employees in the early 1980s (Ge Wei, 1999). After a slight dip in both types of investments in 1986, investment in fixed capital formation tilted towards production activities. The decline in fixed capital investment in 1986 and 1987 is often attributed to the heated policy debate occurring at the time regarding the continuation of SEZ as a national policy of fostering industrialization. As Ge (1999) points out following the unstable policy environment, the GDP growth rate of Shenzhen SEZ dropped to an all-time low of 2.5% in 1986. The instability particularly affected foreign investors considerably leading to a decline in foreign investment contracts by more than 30% from 1985 to 1986.

The significant increase in non-production fixed capital investment in 1991 and 1992 is attributed to the second wave of housing construction in the early 1990s, which was necessary as the demand for the number and quality of the housing units was underestimated in the first wave.
of the construction in the early 1980s. This indicates that Shenzhen SEZ’s astounding economic prosperity had caught even its planners by surprise.

**B. Foreign Investment:** The passing of the Joint Venture Law in 1979 allowed the entry of foreign business as equity joint ventures with local investors to China. This ushered in an influx of FDI in the development of the zone and in the occupancy and use of the zone. As seen in Table 2, financing for infrastructure build-up was generated mostly from foreign investment. As lamented by Chen and De’ Medici’ll (2009), “Shenzhen broke new ground in utilizing foreign investment …for the construction of infrastructure projects”. FDI were encouraged to participate in various rungs of infrastructure project design, construction, management and maintenance.

Consistent with the objective of mobilization external sources to fund the establishment of SEZs, the share of FDI in total investment was 44% in 1980s. While other funding sources slowly became important over time, in the first 10 years from 1980 to 1990, the percentage share of FDI in total investment averaged about 27%. Investors from Hong Kong and Taiwan particularly played a critical role in developing Shenzhen SEZ. Such level of openness is considered to have contributed to the remarkably transition of the Shenzhen-the-fishing village to Shenzhen-the-industrial-powerhouse.

**C. Self-raised funds:** In addition to foreign investment, tapping into local funding sources was an important source of finance for SEZ development in Shenzhen. As shown in Table 2, in 1980, 26% of all investment funds for Shenzhen were mobilized locally. This has increased over time averaging more than 40% between 1980 and 1990 and reaching 51% in 1993. While we do not have detailed information on the types of local financing sources, from our multiple interviews in China, we sensed that land is one of the critical sources of finance for investment in SEZs. This is not surprising given that in the face of scarce local capital, land is the most important (if not the only) asset that can be mobilized to generate finance for investment. In China, land is owned by the state and ownership transfer implies transfer of land use rights from one agent to the other at a cost.

As the first step of granting economic authority, the central government allowed the Guangdong province to generate revenue by transferring land user rights to local and foreign investors in Shenzhen. For example, Shenzhen was for the first time allowed to conduct auctions
that transfer land use rights to the highest bidder (Chen and De’ Medici’ll, 2009). The revenue generated from the land auction is then used to finance infrastructure projects inside the zone.

In addition to the auction system, Shenzhen has relied on other innovative forms of land transfer mechanism to encourage the development of the Industrial Zones. Such forms of land transfer arrangement involve agreement between the Shenzhen administration and private or SOE developers on land size, lease rate and use time of the land. This system allows developers to access land in the zone paying lease rates that are far below-market rates. The agreement entails that after collecting rent from the land for a specified period of time, developers will return the land back to the SEZ administration. This system allows developers to cheaply and easily construct shades or facilities that they can rent out immediately and start recouping the value of their investment up to a certain agreed time frame (for 10 years, for example in Qinahi Free Trade Zone). Such systems of land right transfer also reduces the need for the local administration or central government to develop the land on its own reducing the financial burden associated with financing the construction of factory shades and related infrastructure facilities and amenities in the zones. On the flip side, it allows a speedy construction of the zones without developers paying for the government upfront to access the land. The rapid infrastructure-buildup in the zone has an additional signaling value to interested investors to occupy the factory or facilities quickly. Moreover, when the government gets the land back after the agreed number of years at the end of the contract period, the land would be well-developed with high level of investor occupancy reducing the effort and money required for investment promotion.

In addition to capital gains from land transfer, key internal funding source for subsequent waves of the expansion of the Shenzhen SEZ appears to be corporate profit tax, income tax and fees from processing trade collected from enterprises. In the 1980s, for example, the share of industrial and commercial taxes in Shenzhen total revenue averaged nearly 90 % (Ge, 1999).

**D. Domestic loan:** Loans from domestic commercial banks were used to finance the construction of some of the infrastructure projects in the Shenzhen SEZ. In both our discussion and in the literature, information on the terms and other related details of these loans are not available.

40 Shenzhen’s successful experimentation with the auction system of land transfer has been replicated in other locations as well. Such forms of land transfer are, for example, credited with the rapid expansion of the Pudong New Area of Shanghai in the 1990s (Chen, 2009).
E. Other Funds: As part of the national plan to see Shenzhen become an industrial city, the state financed infrastructure projects through the active involvement of State Owned Enterprises (SOEs). The use of international commercial loans by the provincial government with the guarantee of the central government was also another important source of funding for SEZ establishment and expansion.

ii. Attracting FDI
Shenzhen prosperity is also attributed to its success in attracting massive inflow of FDI to the SEZ. From the start, Shenzhen SEZ was geared towards attracting FDI from different countries in different sectors and, as indicated earlier in Table 2, FDI was the most important source of finance for Shenzhen SEZ from the beginning. At the initial phase of Shenzhen SEZ development, attracting FDI was given a high priority mostly because of local shortages of capital. The possibility of technology transfer and modern management practices were also important reasons for promoting FDI towards Shenzhen SEZ although they do not appear to be as important as the financing constraint rationale.

To promote the flow of FDI to Shenzhen SEZ, the formation of Joint Venture (JV) or co-production businesses, which was facilitated by the passing of the Joint Venture Law in 1979, had been critical. The law set the minimum capital share of FDI in JV arrangement at 25% with no upper limit. More often than not, this arrangement implied that the foreign partner would contribute capital in the form of hard currency, machinery and equipment as well as production and managerial technologies and the domestic (Chinese) partner on his part would bring leased land, factory facilities and raw materials among others (Ge, 1999). Wholly FDI owned firms were allowed to operate in all SEZ including Shenzhen starting from September 1983, where FDI firms were permitted to “lease factory space and building, rent a piece of land, or obtain the land-use right and build needed facilities” (Ge, 1999).

For the most part, Shenzhen’s proximity to Hong Kong presented it with “an entry point to the market outside of China” (Chen and De’Medici’l,l, 2009). Lower labor, land and logistics cost

41 At the initial stages in the early 1980s, the capital share of the Chinese investors was higher as foreigners were still wary of state expropriation or the rolling back of the reform and openness derive. Foreigners started gaining more control of the JVs in the late 1980s as it became clear that the reform agenda will not be reversed.
as well as Head Quarter’s management propinquity to the production site made Shenzhen an attractive investment destination for investors from Hong Kong. Indeed, the share of Hong Kong-based investment in Shenzhen accounted for 66% from 1986-1993. There were several preferential policies enacted to attract FDI to Shenzhen. We briefly review them below.

4.1.4. Preferential policies and incentives

To attract FDI, Shenzhen offered income tax rates amounting to 15%, which was less than half the tax rates companies would be liable to pay outside the SEZ’s. Before the full incorporation of Shekou district to Shenzhen, Shekou district offered even lower income tax rate of 10% to FDI businesses. Based on the length of business operation, enterprises in Shenzhen SEZ also benefited from income tax exemption. For example, businesses engaged in harbor and docks and that are operating 15 and 10 years, are exempted from income tax payment for five and two years respectively from the year they start making profit. Tax relief on profit was also extended to enterprises that export 70% or more of their total value of production.

Within Shenzhen SEZ, bonded zone were also established with the aim of cutting taxes on raw materials, equipment and machinery used in the production processes. These incentives were particularly important policy levers for attracting FDI before China joined World Trade Organization (WTO) in 2011. Prior to 2011, overall tariff and tax rates were high, which might have worked as a disincentive in attracting FDI. In contrast, special policy privileges lowered tax and tariff rates in the bonded zones with the aim of luring FDI into Shenzhen and other SEZs. Investors in high-tech industry in Shenzhen SEZ also benefited from relatively cheap land prices. The fact that the high-tech park is located in the city center would have implied high land cost had they procured the land from the government at market price. To encourage the park, however, land was cheaply offered to them by the government. Other related incentives for high-tech industries also included the provision of cheap office space, and incubation services and relaxing movement of restrictions on talent. Regarding the latter, in the 1980s movement of people from one region to the other was restricted due to the ‘hukou’ or household registration system. Movement of professionals towards the park, however, was exempted from this restriction. It is important to note that there were no fixed incentive systems to encourage the flow of FDI or linkages between FDI and local enterprises. The incentives policies were tailored on the basis of different industries’ demand and stages of development.
Additional market-friendly policies were also introduced in Shenzhen that gave greater leeway for the operation of foreign banks in the SEZ. Before China joined the WTO, there were severe restrictions on foreign financial institutions and in foreign currency transactions. In the absence of foreign banks, trading parties often faced significant financial and time cost conducting export-import trade in local currency. As early as the 1982, however, foreign banks were permitted to operate in Shenzhen SEZ processing foreign exchange transactions. The government also allowed business to retain their foreign currency aboard after paying all expenses incurred in the production and marketing processes. Shenzhen was also the first city or SEZ to operate foreign exchange swap center in China, which allowed for the free exchange of local and foreign currencies on agreed terms on rate and date. In 1983, Shenzhen SEZ also allowed the operation of the stock market for the first time after 1949 (Mee Kam Ng and Wing-Shing Tang, 2004). Such form of market liberalization and openness is attributed to have created a smooth working operation on international transactions and confidence that helped attract FDI to the SEZ.

A parallel reform in opening up of the logistics sector is also considered to have positively contributed to Shenzhen’s growing appeal as an FDI destination in China. Without improving efficiency in logistics, attracting and retaining FDI would have been difficult. Reforms in the logistics sector complemented the provision of infrastructure facilities in enhancing the procurement, production and marketing efficiency of enterprises in Shenzhen SEZ. To enhance the competitiveness of enterprises in the zone, efficient delivery of raw materials and final products to the market is important and hence modern logistics system is sought after. The participation of foreign logistics companies has upgraded the Shenzhen SEZs’ capacity to efficiently handle the logistics system.

All these policies seem to have paid off substantially as observed by the level of FDI commitment in Shenzhen SEZ. In one year time, FDI in Shenzhen reached 400 million USD (Nishitateno, 1983) and in the following few years leading up to 1985, FDI increased by more than 70% (Chen and De’ Medici’ll, 2009). By 2003, Shenzhen SEZ has attracted FDI amounting to 30 billion USD and annual exports were valued at 48 billion USD (FIAS, 2008).

In more recent years, notwithstanding the importance of incentives and preferential treatment policies, it has become increasingly difficult to attract FDI with limited range of fiscal policies, such as tax or duty reductions and subsidized land provision. The ability to attract FDI is
now increasingly tied to the ‘software’ of the system; the investment environment, provisions of public services, and integrated value chain among others.

iii. Political power, autonomy and managerial flexibility
The role of the central government has been crucial in establishing and regulating SEZs in China in general and in Shenzhen SEZ in particular. The central government, for example, grants the provinces the rights to develop SEZs using land as an instrument to generate capital. Performance of the local authorities is then evaluated based on how effective they are on setting up and managing the SEZs according to nationally set strategies.

Shenzhen SEZ was the first testing ground for the central government’s decision to reform and open up China to the outside world. Liberalization of the financial and logistics sector, FDI and land auctioning were all experimental projects that were tried out in Shenzhen for the first time and more than anywhere else in China. For such experimentation to be possible, high level of management and administration autonomy was required.

Following the establishment of Shenzhen as SEZ in December 1979 (early 1980), the provincial administration of the Gunandong zone was established in 1980 and, under the Primer’s office, the office of the SEZ was established in 1982 (Goodman, 2013). Some argue that the presence of several regulatory bodies had made the lines of responsibility between the SEZ administrations at province and national level unclear (Goodman, 2013). In due courses, however, greater clarity on responsibilities of regulation and service delivery seems to have emerged.

The first phase of the management of Shenzhen SEZ was established in 1980 with the central government transferring considerable level of economic authority to the Guangdong province. This was hoped to lessen bureaucratic red tapes and intractable regulations that bedevils the rest of the country. To facilitate further flexibility in attracting FDI, the Guangdong province set up a Committee for Administering Shenzhen on behalf of the province.

Overtime, however, it became clear that Shenzhen SEZ will have to be granted greater administrative autonomy to operate efficiently. In fact, the Shenzhen municipality took over all the powers of the province committee and assumed the direct responsibility of managing Shenzhen SEZ since 1992. The benefit of leveraging the administrative committee at the level of the zone is for example apparent when more land is required for expansion purposes. Under normal circumstances where administrative hierarchy is strictly observed, land issuance process starts
from the central government and proceeds to the provincial government and then to the local government (request for land flows the opposite direction). Through this process, the decision whether to offer or deny additional plot of land for the IP development is reached and communicated back to the SEZ. The evolution of the administrative structure of the SEZs has empowered the Shenzhen SEZ administration committee enabling it to side-step this lengthy process. Since the land minister himself was, for example, part of the high-level steering committee, the central government can easily issue more land to the IP circumventing the lengthy process that would otherwise transpire had Shenzhen administration committee been without administrative autonomy.

### 4.1.5. Administration and governance of Shenzhen SEZ

As discussed earlier ‘The Regulation on Special Economic Zone’ has paved the way for provinces to acquire greater economic freedom. This has increased the stake and control of local authorities on economic actors leading to their constructive involvement in resource allocation and regulation to ensure good performance. Thus the administration and management of Shenzhen SEZ by the province initially was geared towards enhancing the economic performance of firms to prove to the central government that their newly discovered freedom has been put to productive use.

In consonance with its economic transformation, Shenzhen has also experienced a continuous change in the way it was administered. Even in 1980s, there were several changes aimed at accommodating Shenzhen’s rapid development and transformation. When Shenzhen was set up and elevated to an SEZ in 1980, the administration of Shenzhen was overseen by Guangdong provincial government through its committee dubbed as the Guangdong Provincial Administrative Committee (GPAC). This committee had strong administrative power including the preparation and implementation of plans, registration and approval of investment projects and so forth.

In 1981, Shenzhen administration was elevated to a “semi-provincial” level administration, with it attaining greater administrative power comparable to other municipalities in Guangdong provinces. This significantly expanded the administrative power of the Shenzhen municipality’s government at the expense of GPAC. To offset criticism against malpractices in SEZs and other newly established SEZs in connection with illegal transactions including smuggling, the State

42 Legislative powers remained at the provincial level at this time, where the people congress of Guangdong and Fujian exercised.
Council’s office for SEZ affairs was set up in 1982 to handle major policies issues related with the
development and administration of all SEZs in China (Figure 4 is replicated from Yee (1992) to
display the administrative structure of Shenzhen in the 1980s).
In October 1989, Shenzhen’s economic authority was elevated to a full provincial level
administration. This administrative arrangement was carried out from 1989 to 1992, until
Shenzhen was granted a full municipality status with legislative power in 1992. Since Shenzhen
acquired legislative authority, it has enacted numerous laws and administrative regulations aimed
at improving the operation of the market, city management and social welfare. Through all these
various administrative restructuring, investment promotion has remained the shared responsibility
of both the central and local authorities.

Figure 5 shows that the administrative structure of Shenzhen was highly complicated. Yet
it is important to note that the key agencies with de jure administrative power are Shenzhen
Municipality government and the state council for SEZ office. Shenzhen on its part exercised
administrative power over Shekou, Luohu, Nantou, Shatoujlao and Shangbu development districts
in the 1980s. Baoan and Longgang districts were included into Shenzhen municipality in 1993 and
into Shenzhen SEZ in 2010.
Figure 5: Administrative Structure of the Shenzhen Special Economic Zone

Notes:
- CMSNC - China Merchants Steam Navigation Company, Ltd.
- NOSDS - Nanhai Oil Shenzhen Development and Services Corp. It is a joint venture of Shenzhen SEZ Development Corp., Nanhai Oil service Base; and Everbright Co.
- CNDC - China Nanshan Development Company Ltd.; CNDC is a joint venture formed by eight corporations.
- GOCAC - Guangdong Overseas Chinese Affairs Committee.
Shenzhen Industrial Zone has been renamed as Huaiqicheng Zone since 1985, under the development of China Trade services of Hong Kong.
- GPAC - Guangdong Provincial Administrative Committee for SEZs.
Despite its growing administrative autonomy and power, Shenzhen SEZ did not fully incorporate all development districts under its full authority. Within Shenzhen SEZ, some of the major districts continued to enjoy “autonomous management and development of administrative Units” (Yee, 1992). As indicated in Figure 4, the powerful presence of the Chinese Merchants Steam Navigation Company (CMSNC), a Hong kong based Chinese SOE under the Ministry of Communication, and Nanhai Oil Shenzhen Development and Service Corporation (NOSDS) in Shekou and Nantou districts respectively is, for example, said to have had an effect in influencing SEZ policies due to its strong linkages with the central government. Table 16 presents a brief summary of the administrative structure in two of these development districts in Shenzhen SEZ.

Table 16: Administration and administrative autonomy of Shekou and Nantou District in Shenzhen SEZ in 1986.

<table>
<thead>
<tr>
<th>Development District</th>
<th>Administrator</th>
<th>Administrative autonomy</th>
</tr>
</thead>
</table>
| Shekou               | the Chinese Merchants Steam Navigation Company (CMSNC) | • Autonomous economic and planning units within Shenzhen SEZ directly communicating with the central government  
• Sets its own economic and urban plans  
• Exercised administrative control over public security, taxation, labor management, materials import and exports, business registration and regulations |
| Nantou               | Nanhai Oil Shenzhen Development and Service Corporation | • Was active in land-use planning and management of the district  
• Supplied all basic infrastructure  
• Sometimes bypassed Shenzhen planners |

Source: Own compilation using information from Yee (1991), pages, 67-69.

**Brief Implications**

Prior to 1979 the state controlled major productive resource and all decisions related with how to use and distribute economic resources were determined through a lengthy and bureaucratic planning system in China. Owing to a multitude of local and international factors reform to open-up and transform the country was sought. Before the onset of a fully blown out reform drive, SEZs were used as enclaves of experimentation with new policies that are presumed conducive for

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43 CMSNC’s board of directors included both the Minister and Vice Minister of the Ministry of Communications (Yee, 1992).
attracting FDI and implementing the domestic reform agenda. With this spirit of reform, Shenzhen SEZ was established in December 1979. Shenzhen SEZ was initially administered by a provincial level committee but later was elevated to a “semi-provincial” level administration in 1981 and then to municipality level administration with full administrative autonomy.

While Shenzhen SEZ is managed by appointees of the state with the participation of other government officials in different level of government, it appears to be run as a corporation with efficiency in regulation and service delivery at the forefront of the SEZ management. The primary objective of laws and regulations set to govern the SEZ, for example, appear to be tending more towards attracting FDI and maximizing the benefits from FDI and facilitating the development of the SEZ rather than shielding against possible wrongdoings and malpractices. This allowed the system of governance and administration at the local level to be geared towards experimentation and innovation with high risk-taking and potentially high payoff policy instruments. The existing political structure also tolerated errors committed by SEZ planners and administrators with the understanding that mistakes as a result of the complexity of the policy making and implementation process are unavoidable and that active learning from such mistakes are important.

The central government also sent clear messages that SEZ are national projects that are to be implemented by the local level authorities. Local level discretion has in turn stimulated the emergency of high end and far-sighted planning covering all aspects of infrastructure, transport, logistics and industrial planning. The government’s willingness to experiment with several new and market-friendly policy tools in the wake of centralized planning and closed political economy required not only strong commitment and high-level of implementation capacity but also a courage to bear high levels of risk by transferring economic authority to local actors.

Chinese experience amply demonstrates that the government should be more proactive and should assume a leading role in the development of IPs. The government role will of course change over time with greater role at the early stages and lesser role later on as the industry and sector matures over time. Private developers can also be included in this process but still under the government leadership, particularly at the early stage of SEZ or industrial park development. In short, the central government provided direction and policies, chose officials to manage the Shenzhen SEZs and granted them administrative and economic management flexibility. The role of the central government thus changed from micro-management to macro-management rapidly.
transferring greater economic power to local authorities at Shenzhen SEZ to both generate revenues and spend it the way it sees fit. Local officials were further evaluated based on their performance related with SEZ management. This form of administrative and economic decision making autonomy has aligned the incentive of local officials with the drive to get the best out of SEZ using local level information, incentives and, more importantly, market forces.

4.2. The Suzhou Industrial Park (SIP)

4.2.1. Evolution of the SIP: Chinese-Singapore partnership

Starting the 1980s, China was eager to learn management skills and knowledge from the West World to modernize its economy. Various high level delegates had visited not only developed countries in the West but also emerging Asian economic tigers. Deng Xiaoping, the architect of reform in China, in his tour of southern China in February 1992 visited Singapore. He praised Singapore as being model for China could look to learn modern economic management. China had shown keen interest to learn modern management systems particularly on industrial park development from Singapore. In the same year (September-October), Lee Kuan Yew (the then prime minister of Singapore) visited China and expressed his interest to forge a bilateral project, which Singapore would share its experiences. Singapore saw China as important market for its “regionalization strategy”. Both sides believe that the SIP, developed and managed based on Singapore model would be attractive for foreign direct investment (Minli, 2008; Zhao and Farole, 2011).

Suzhou was selected primarily to its location advantage, particularly proximity to Shanghai, the financial hub. The choice of Suzhou as a location for the China-Singapore cooperation, was not, however decided out rightly. Singapore had initially shown interest to locate in Shanghai but the Shanghai government did not come forward. There was also competition from other provinces,

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44 Other competitor countries from East Asia has already took foot at other regions in China. For example, Guangdong was already dominated by Hong Kong investors, Fujian by Taiwanese investors, Shandong by South Korean investors, and Liaoning by Japanese investors.
for example Shandong and Ningbo to host the Singapore initiative. The choice between Shandong and Suzhou was particularly difficult, which took some time for the Singapore government to come to a decision.

In December 1992, an agreement was signed between China and Singapore to develop and Industry Township in Suzhou. A 70 square km area was designated for the development of the industry zone. Subsequently, in 1994 Chinese vice Premier Li Lanqing and Singapore Senior Minister Lee Kuan Yew signed the Agreement on the Joint Development of Suzhou Industrial Park in Suzhou. Box 3 below provides the timeline and major milestone of the SIP development.

**Box 3: Timeline and major milestone the SIP**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>Agreement signed by the Singapore and Suzhou governments to confirm both parties interest to jointly develop an industrial township in Suzhou.</td>
</tr>
<tr>
<td>1993</td>
<td>In-principle agreement signed by the Singapore and Suzhou governments to establish a joint venture enterprise to develop the township. The Singapore-Suzhou Township Development Private Limited (SSTD) – Singaporean consortium and a Chinese counterpart consortium called Suzhou United Development Company (SUDC) were established.</td>
</tr>
<tr>
<td>1994</td>
<td>The SIP was officially launched with the formation of joint venture equity known as China-Singapore Industrial Park Development Company (CSSD) comprising the SSTD and SUDC respectively owning 65% and 35% of the joint venture. Agreement signed with the first batch of 14 investors, of which seven from Singapore, three from the United States, and the rest one each from South Korea, New Zealand, Hong Kong and Japan.</td>
</tr>
<tr>
<td>1995</td>
<td>The Suzhou Industrial Park Administration Commission (SIPAC) was established. About 19 departments including SEZs office of State Council, set up on-site offices in SIP. The SIP granted preferential treatment of Special Economic Zones in terms of import tariffs. Rexton (Suzhou) Hearing Systems, a hearing-aid manufacturer and affiliate of German electronics conglomerate Siemens, became the SIP’s first tenant to commence operation in a readily built factory within the park.</td>
</tr>
<tr>
<td>1997</td>
<td>The first phase of developing eight-square kilometre are was completed.</td>
</tr>
<tr>
<td>1999</td>
<td>A new Memorandum of Understanding (MoU) was signed between China and Singapore, under which Singapore’s share in CSSD to reduce from 65% to 35%, while china’s share to correspondingly increase from 35% to 65%. Both parties also agreed the major responsibility of the management of CSSD to be transferred from Singapore side to the Chinese side.</td>
</tr>
</tbody>
</table>
2001 – The equity of the two parties was adjusted according to the MoU in 1999 and the management control of the SIP was transferred to China. SIP bonded zone for export processing was in operation.

2006 – Agreement was signed to expand the SIP from 70 square kms to 80 square kms.

2007 – The SIP become a pilot of National high and new Technology zone and also demonstration zone for service outsourcing.

2008 – The SIP Integrated Free Trade Zone (the first one in China) was in operation and customs set up an office in the zone.

Compiled from Zhao and Farole (2011) and Singapore Infopedia (2015)

According to Minli (2008) the collaboration for the SIP was agreed to take place at two levels. The first level of the collaboration would be a private-sector venture, aimed at establishing an industrial, commercial and residential modern township in Suzhou that will be run along Singapore lines. The second collaboration is related to knowledge transfer, i.e. the Singapore government would transfer its development software to Suzhou and help Suzhou set up a development authority that would zone and regulate the township.

4.2.2. Profile of Suzhou Special Economic Zone

The Suzhou Industrial Park (SIP) is one of the major success cases in China’s recent economic progress and particularly industrial township development. This industrial park is located about six kilometres to the east of the old city Suzhou, which was swampy farm land with scattered villages. It is only 80 kilometres (kms) distance from Shanghai city and 120 kms from Shanghai Pudong International Airport. The park also lies on major railroads and expressways connecting Beijing-Shanghai as well as Nanjing-Shanghai. The park is also accessible by water, for example, the Beijing-Hangzhou Grand Canal (the longest manmade canal in the world, goes through Suzhou (Hong Kong Trade Development Council, HKTDC, 2014).

The SIP covers about 288 square kms among which 80 square km belongs to the China-Singapore joint-venture corporation. The park is currently the home for about 25,000 enterprises generating employment for above 600,000 employees. According to 2010 statistics (see Box 4), the park has attracted above 4,000 foreign companies, out of which 137 are among fortune-500


companies. It generated nearly 40.3 billion USD total contracted foreign capital, out of which 8.9 billion USD utilized foreign capital. The following expression tells well the dynamics of the park in terms of attracting foreign investment.

“In statistical average, SIP has attracted nearly six million US dollar foreign investment every day and witnessed the establishment of one foreign enterprise every two days, the delivery of 100,000 square meters building every two weeks, ranking second among national development zones in terms of comprehensive development indicators” (source: Suzhou Industrial Park Handbook of Manufacturing Industry).

Currently, the SIP consists the following six functioning areas (source: investment guide SIP and Zhao and Farole, 2011).

1. Dushu Lake Innovation District of Science and Technology (11 square kilometers)
2. Jinji Lake-Rim Central Business District (CBD)
3. SIP Ecological Science Hub (4 square kilometers)
4. Phase-3 New and High-Tech Industrial Area
5. Integrated Free Trade Zone (5.28 square kilometers)
6. Yangcheng Lake Tourism Resort

**Box 4: Key Statistics (2010)**

<table>
<thead>
<tr>
<th>Investment</th>
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</thead>
<tbody>
<tr>
<td><strong>Number of foreign companies</strong> 4,000 including 137 fortune-500 companies</td>
</tr>
<tr>
<td><strong>Total contracted foreign capital</strong> 40.3 billion USD</td>
</tr>
<tr>
<td><strong>utilized foreign capital</strong> 18.9</td>
</tr>
<tr>
<td><strong>accumulated registered domestic capital</strong> RMB 197.2 billion of</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GDP and revenue source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>30% annual average growth</strong> (1994-2010)</td>
</tr>
<tr>
<td><strong>RMB 133 billion of GDP</strong></td>
</tr>
<tr>
<td><strong>RMB 165 billion of accumulated taxes</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment</th>
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</thead>
<tbody>
<tr>
<td><strong>Employment (end of 2010) - 600,000</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Exports</th>
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<tbody>
<tr>
<td><strong>Exports: USD 34.3 billion</strong></td>
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</tbody>
</table>

The SIP is ranked among the leading industrial parks in China based on various indicators including competitiveness, technology innovation, comprehensive economic strength, business

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friendly, environment and emission reduction index, as well as human resource and social responsibilities. See below some of the ranking among the National Economic and Trade Development Zones (Source: SIP Science and Technology Investment Guide)50.

- No. 1 among most competitive development zones
- No. 1 for infrastructure capability
- No. 1 for environment and emission reduction index
- No. 2 for investment environment
- No. 2 for technology innovation environment
- No. 3 for comprehensive economic strength
- No. 3 for human resources and social responsibility

The SIP has become a major driving force of Suzhou economy. It maintained a sustainable annual average economic growth of 30% over the period (1994-2010) reaching about RMB 133 billion GDP in 2010 contributing about 14.5% of Suzhou total GDP. In 2010, exports from the SIP hit at about US$34.3 billion, accounting for 42.1% of Suzhou’s total. In terms of export value, the park ranked second among the state-level economic and technological development zones in China, after Kunshan Economic and Technological Development Zone (Kunshan, ETDZ). The main export products include electronic products and equipment. The export value of software amounted to US$800 million, accounting for 5.6% of China’s total.51

4.2.3. Governance structure of the Suzhou Special Economic Zone

The China-Singapore - SIP had three levels of governance structure. As shown from the figure below (taken from Minli, 2008), the high level coordination body to the partnership was the China-Singapore Joint Steering Council (JSC), which was headed by deputy prime ministers of both countries. This JSC was to be the main political committee responsible for facilitating macro-level state policies and easing the implementation of the project. The JSC was to meet annually and

make sure that overall performance targets were achieved at the lower working levels. See figure 6.

**Figure 6: Chinese – Singapore SEZ organizational structure**

The second level of coordination was the *China Singapore Joint Working Committee (JWC)*; consisting of local Jiangsu, Suzhou and Singapore government officials responsible for looking into the direct challenges and issues facing the industrial park’s development. The JWC was co-chaired by the Suzhou Mayor and the Chairman of the Singapore Economic Development Board. This committee was very active particularly during the start-up phase and meets approximately four times a year. Under the JWC, there were two parallel structures; namely,

(i) the Suzhou Industrial Park Administrative Committee (SIPAC) and

(ii) the China-Singapore Suzhou Development Company (CSSD).

The Suzhou Industrial Park Administrative Committee (SIPAC) was empowered by the Suzhou municipal government as an independent local government authority to oversee the SIP.
According to Minli (2008) and Zhao and Farole (2011) the SIPAC was granted high autonomy including all administrative matters such as resources regulation, approval and licensing, as well as business services and coordination with related government departments or agencies at the various levels. It was also responsible for approving investment projects, planning and regulating the use of land, construction development, traffic flow as well as environmental protection. SIPAC was also the main agency to undergo the Singapore government’s software transfer program.

Officials and employees of SIPAC were Chinese nationals, appointed by the Jiangsu Provincial Government, and recruited from amongst the most qualified of candidates in China. However, the province and city level administrations have nominal power on the operational activities of the industrial park. The SIP administration directly communicate with the central government for guidance and support.

The China-Singapore Suzhou Development Company (CSSD) is a joint venture company between the Singapore-led consortium, the Singapore-Suzhou Township Development Co. Ltd (SSTD), and the China-led consortium, the China Suzhou Industrial Park Company Ltd (CSIPC). The CSSD was responsible for the development, management and commercial viability of the SIP. Singapore mobilized about 21 SOEs and other 3 investors to invest in Suzhou. On the other hand, the Chinese consortium was made of several large Chinese SOEs at national, provincial and municipal levels.

According to Zhao and Farole (2011), the initial total amount of investment was estimated at about 100 million USD with a registered capital of US$50 million. The CSSD investment increased to USD 150 million and USD 300 million the next two years (1995-96). Until 1999, the Singapore consortium controlled 65% of the shares, while China only 35%.

With the exception to some disagreements over land prices, the Suzhou government basically accepted the proposed term sheet in its entirety without much dispute, including the proposed the 65%-35% share ratio as structured by the Singapore Consortium. The reason according to a former Chinese official quoted in Minli (2008) was as given:

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52 Based on the discussions with the officials in our visit we learned that the Chinese government administration committee which is composed of experts and management leading day to day activities had a parallel structure of the Communist Party Committee providing general guidance.
“We said to them ‘With regards to the share structure, you want how much, you take how much’. Why? Because at that time, we were not just looking at it just from the economic perspective, but more importantly, was that once the Singapore side had the controlling stake, they could come manage (the project), they could bring the best of their talents to Suzhou, send them to the various departments within CSSD. All department heads would be from Singapore, would be delegated by them, so that the entire management concept and model could also flow through…if we were to take the 65% majority share, that would mean that we would have to run the project, and that would mean doing things the same Chinese way wouldn’t it? That is not what we wanted. We wanted to make this a success.”

Land prices was often a source of contention between the two parties. But more serious problem was the financial unviability of the industrial park. The park was running under loss particularly for the first five initial years, incurring about US$90 million. Another problem seriously felt particularly by the Singapore government was the stiff completion the SIP faced from the nearby Suzhou New District (SND). The SND is a 52 square-kilometre high-tech industrial zone wholly established by the Suzhou government in 1990. As the Suzhou city government had only a minority (35%) share in the SIP, while they had a major stake in SND, the city government was perceived to ignore the SIP. The prime minister of Singapore visited China to discuss the growing frustration and misalignment of interest between the two parties. The Singapore side requested for a halt of the SND, which was not accepted by the Chinese side. Instead the Chinese government adopted a new incentive, i.e. exempting the SIP from a new tax policy on foreign investment in January 1999 (Minli, 2008; and Singapore Infopedia, 2015).

Due to the misalignment of interest of the parties, the Singapore consortium decided to lower its stake to 35%, while the Chinese share to correspondingly increase to 65%. The management control was also transferred to the Chinese. In 2001, one year after Singapore lowered its stake, the park made its first profit of $3.8 million. By 2003, it had recouped the US$77 million cumulative losses incurred during the first seven years of operation and paid its first dividend in 2004 (Singapore Infopedia, 2015).

4.2.4. Knowledge sharing: the ‘software transfer’ process

Singapore not only brought initial capital for the zone development but also wide-range of technical knowledge and expertise. A formal knowledge sharing scheme and institutional structure was built into the partnership agreement from its inception. The Chinese side established an Adapting Singapore Experience Office under the SIPAC, and the Singapore side set up a
counterpart – the Software project Office (SPO) affiliated with JTC. The two agencies meet quarterly to review the software transfer program (Zhao and Farole (2011)).

According to Minli (2008) the idea of the ‘software transfer’ was for the Singapore government, with its solid track record in developing top notch industrial parks and world class management standards of operation and human resource management, to impart its knowledge and experience in these areas to the Suzhou government. There were two levels of learning that the Suzhou government was keen to pursue with Singapore. The first consisted of hardware and urban planning expertise skills. This was to be centred on the Singapore’s infrastructure blueprint, in particular the Jurong Town Corporation (JTC) model which changed the industrial and investment landscape of Singapore by providing advanced and specialized ready-built business and industrial facilities and spaces allowing foreign investors to set up operations in Singapore in a very short period of time.

The second level of learning involves Singapore’s software capabilities. Software here refers to the business and administration methods utilized by the Singapore government and organizations, and encompasses the more abstract but equally important area of management knowledge transfer and policy making processes which are tacit in nature. One major mechanism of the experience sharing was a training of Chinese officials and experts. For example, in twenty years since inception (1994-2014) about 2300 Suzhou and SIP officials had been trained by Singapore in areas such as economic, urban and labor management as part of the ‘software’ transfer (Singapore Infopedia, 2015). To ensure the effectiveness of the knowledge transfer, officials that attended training were required to report what they had learned. Moreover, the Chinese drafted more than 100 laws and regulations by adapting Singapore practice to local conditions (Zahou and Farole, 2011).

1) Urban planning and Development

The Singapore and Chinese collaboration was also very fruitful in terms the development of sophisticated and far sighting urban planning. The SIP was officially launched in 1994 but the plan was done a year earlier in 1993. The first phase of the plan covers about 70 km-square which was developed by the joint venture Sino-Singapore Corporation. The plan has been revised every 5 years, specifically in 2000 and 2006. In 2000, the plan was integrated with the Suzhou old city.
The green concept received sufficient focus during the 2000 revision plan. In 2006, the plan extended the park from 70 km-sq to 280 km-sq with a planned population of about 2 million. The expansion to 280 km-sq was, of course, envisaged in the initial stage. The development was however stage by stage.

According to the explanation from the officials during our visit, the urban planning process followed the following sequential activities.

Mater plan → detailed plan → urban design → architecture design → construction management → audit and use

- The master plan - should include land use, transportation, infrastructure report and specific topics
- Detailed plan - includes zoning, setbacks, green space ratio, plot ratio (density), number of parking, vehicle entry and exit
- Urban design addresses building height, architecture morphology, open spaces, colour windows wall ratio etc.
- Architecture design – preliminary design and construction drawings
- Construction management – setting out checking and follow up

The plan included not only a general framework and detailed master plan, laying out land by industry, trade, living, and other town functions, but also set up more than 300 professional plans (Zahou and Farole, 2011). The following picture taken from the exhibition-hall describes the allocation of land according to different uses such as industry, residential, commercial and green areas.
Industry location: Industry development constitute about 33% of the total land area. Regulation and standards how to build the sheds was formulated beforehand and private developers need to abide by that. The location of the industries in relation to the residential areas was chiefly determined by their pollution level.

- Light industries with no pollution \(\rightarrow\) location close to residential areas
- Non-pollutant industries (no air pollution, no noise and no toxic material) \(\rightarrow\) no buffer zone needed and can locate within 15 meters to the residential areas
- Low pollution (e.g. textile, wood processing ...) \(\rightarrow\) buffer zone 300-500 meters
- High pollutant (e.g. food processing, repair and maintenance, auto industry) \(\rightarrow\) located with distance greater 500 meters from residential areas

The pollutant factories were obliged to apply noise control, waste water treatment and other ways of abatement methods.

Residential areas: Residential area account for about 27% of total area. The residential areas were built by government, the factories, and private developers. There are three types of residential buildings.
- High density residential areas
- Medium density residential areas – accommodating middle income people
- Low-density areas primarily for high income people

The planning experience at the SIP helped to build a management philosophy among Chinese officials of (1) planning before construction and (2) constructing underground works before works above ground. The SIP has become a model of change and innovation for other parts of China, whereby more than 20,000 officials from all over China make learning visits to SIP each year. Singapore and Singaporean companies have been invited by many other cities to design their land plans and share their experiences (Zahou and Farole, 2011).

2) Upgrading and transformation

The SIP has exhibited tremendous industrial upgrading through time towards the high-tech and service oriented industries. The first phase of the park’s development involved manufacturing companies setting up factories to produce consumer electronic goods. Through time the SIP climbed the value chain to the more knowledge- and capital-intensive industries as well as start to give more attention to R&D and marketing process. SIP has built three million square meters technological facilities, including Suzhou international science park (SISPARK), Innovation Industry Park, BioBay, Ecological Science Hub, and Nano-Tech Industrial park (source: Suzhou Industrial Park Investment Guide, 2015).

According to Business Wire (2014) the SIP has already laid most of the groundwork to achieve that goal, including attracting 25 world-class universities and eight institutes and technical colleges. There are 18 universities in Suzhou, including Suzhou University and Suzhou Technology University. To meet the demand for skilled workers, Suzhou IP has set up its own training center, the Institute of Vocational Technology.

Moreover, in 2002 the SIP launched the Suzhou Dushu Lake Science & Education Innovation District, which spreads over 25 sq. km and is home to 80,000 students. The science park incubates start-up micro & small enterprises, estimated to be more than 2,000 (Business Wire, 2014). As a result, competitive industrial clusters of Integrated Circuit (IC), Liquid Crystal Display

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(LCD), auto and aeronautical parts, software and service outsourcing, bio-pharmaceutical, nano-tech new materials and new energy started to emerge in the SIP. The SIP contribution to the country value of output reaches 3% on IT, 15% on IC, and 5% of offshore service outsourcing output value (source: SIP Handbook of manufacturing Industry).

3) **Main lessons: Success factors of the SIP**

When we asked the officials what was the unexpected result of the development process of the SIP, they replied the main unexpected result was the speed of the development. One of them states that “We planned to achieve this all between 25-35 years, but we achieved them in less than 20 years.” Indeed, the SIP has exhibited remarkable success in short time period than expected. In our discussion with the Chinese officials at the park who have led the park development at different capacities pointed out the following factors for the success of the SIP.

a) The park development should be led by government. In the absence of strong government the private decision might lead to unexpected results.

b) Favourable policy environment and high attention from senior politicians including the president

c) Sufficient power to local administrations

d) Success depends on good master plan – distinctive zoning and land use

e) Aim high standards – a sustainable new industrial town – existing condition not prioritized

f) Regional positioning – avoid competition with metropolitan of Shanghai – avoid disturbance to the Suzhou old city and Consider different typologies, culture, style, color etc to place uniqueness

These factors, indeed, align with most of our observations and the literature that we have gone through so far. The following discussion tries to enrich the success factors and draws the main lessons.

First, industrial park development can’t be succeeded without full government commitment and support. As shown in the main text, the park development might not be profitable

in the short-term. It may be very difficult to expect the private sector to wait 10 or more years to start reap the benefits of investment. Moreover, the park development is not purely a business activity that can be left to the private sector alone. It concerns a variety of stakeholders and involves administrative, political and legal decisions. Broadly perceived it is also about urban administration. The implication is that the government should take the lead in the development the industrial parks.

Second, China has deliberately used the industrial parks and the Special Economic Zones in general not only as a way to generate foreign knowledge and capital but also a venue to experiment reforms and new policies that will be diffused to other parts of the country when successful. The SIP is not different in this regard and has been an experiment for introduction of various reforms. This might partly reflect special circumstance of China starting from command economy, but the experimentation in small geographical areas such as the industrial parks can be used for policy experiment in other developing countries including Ethiopia. By the way there is no use to have industrial park if it consists similar regulations, incentives, infrastructure and other facilities with the places not designated as a park.

Thirdly, the experience in the SIP and other show us that great local autonomy was crucial for success of the industrial parks. Local autonomy to administer the parks, introduce new regulations and laws, generate finance, benefit from the tax collection etc. This has led to great competition among different regions to attract investment. On the other hand, great attention and support from the higher political echelon was another important ingredient for the success of the park.

Fourth, the park development has two aspects – hardware and software systems. The hard were includes the initial plan and capital, while the software refers to good policy, procedure and methods. The software knowledge transfer was the key objective of the Chinese-Singapore partnership. The Chinese government didn’t insist on taking higher share in the SIP at the initial stage, while it was providing various resources (cheap land) and incentives to motivate the Singaporean side be able to transfer the knowledge. From the inception of the partnership, there was a clear plan and institutional arrangement on how the knowledge can be transferred. As a result, the Chinese had no difficulties to take over the management of the SIP in 6-7 years’ time.
Fifth, conscious upgrading efforts was another crucial factor for the transformation of the SIP from low value added activity to high-tech industries, innovation and R&D, as well as high end services. In this regard, the role of State Owned Enterprises (SOEs) was very important aggressively investing in new technologies and joint-venturing with foreign companies.

4.3. Review of Industrial Park Development in Other Countries
The last two sub sections discussed about two Industrial Parks in China. Several other countries have also a variety of experience in industrial parks development. This section discusses a brief review of few selected countries in industrial Park development.

i. Masan Free Zone, Republic of Korea
Many of Asia’s EPZs experienced rapid and sustained growth. Created in 1970, the Masan Free Zone became the prototypical export processing zone. Initially, it was called the Masan Free Export Zone and was primarily dedicated to attracting FDI in manufacturing export activities. The objective in creating Masan FEZ was to support the development of manufacturing activities that complemented those of the Korean economy but did not compete with them. Thus, investment was constrained by qualification criteria, and the zone was kept relatively small—originally 10 hectares, expanded to 90 hectares. It offered a prime investment and operating environment to qualifying enterprises, including excellent external infrastructure (port, airport, roads) and a high-quality industrial park with solid management and support services. Masan’s small size did not detract from its economic impact, which has been significant. It attracted prime foreign enterprises in the electronics industry. In 1971, these enterprises “imported” only 3 percent of their production components from Korea; by 1986, 45 percent of these components were sourced from Korea. The zone achieved one of its crucial objectives: serving as a catalyst for economic diversification through the creation of national competitive clusters in high-value manufacturing. Masan was restructured in 2000 to reflect the liberalized global and domestic economic environment (Farole, 2011).
ii. Mauritius Export Processing Zone

The Mauritius Export Processing Zone (MEPZ) is one of Africa’s most famous and successful examples of the free enterprise type of EPZ, in which companies are granted status on an individual basis and are free to locate anywhere on the island, including in industrial parks that are not restricted to MEPZ enterprises. MEPZ enterprises dot the national territory; historically, they have located near labor force pools. Mauritius is only 1,800 km2. The small size greatly simplifies access to key infrastructure, as no enterprise is more than 60 km from the international airport and the port. This EPZ strategy allowed the country to avoid having to set up industrial parks to host MEPZs when their numbers reached 600 firms in the late 1980s to mid-1990s. Mauritius also operates the Mauritius Freeport, which is a small commercial free zone within the island’s commercial port in the capital city of Port Louis. Companies must operate within the designated perimeter (Baissac, 2010; cited in Farole, 2011).

iii. Malaysia Export Zone

Malaysia’s first zone opened near Penang Island in 1972. It rapidly became attractive to American firms in particular, which set up manufacturing operations in labor-intensive electronics assembly. Malaysia’s EPZs grew by 13.3 percent a year in the 1970s. By 1995, more than 400 firms were operating in the zones. By 2003, the zones employed nearly a million workers, a third of them in increasingly high-tech segments of the electrical and electronics industries. Malaysia’s electronics industry, created virtually from nothing within the zones, now produces about 10 percent of the world’s semiconductors (Farole, 2011).

iv. The Middle East and North Africa

The Middle East and North Africa initially chose to develop FTZs, whose numbers also expanded in the 1960s and 1970s, notably in Egypt, Israel, Jordan, and Syria. Tunisia chose the EPZ route. In the 1990s, manufacturing activities took root, notably through the Qualified Industrial Zone program. Although most countries in Sub-Saharan Africa did not develop zone programs until the 1990s, several launched earlier initiatives, including Liberia (1970), Mauritius (1971), and Senegal (1974). By the mid-1980s, EPZs were a fixture of trade and industrial policy in all regions of the world (Farole, 2011).
There is generally an increasing trend in the development of Free Economic Zones (FEZs) in the MENA region. In the MENA OECD Stock-taking report (2005), there were 48 functioning zones in the MENA region as a whole; with three MENA countries having no FEZs at that time namely Oman, Qatar and Saudi Arabia. According to the 2008 update, there were about 73 FEZs. The numbers have almost doubled from 48 in 2005 to around 89 FEZs in 2009 (MENA-OECD, 2009). Moreover, the three countries that did not have FEZs had set up concrete plans for their development. Saudi Arabia had set ambitious goals for creating six “special economic cities” with a goal of creating 1.3 million employment opportunities by 2020. The King Abdullah Economic City is slated to be built first and will be divided into six areas: the sea port, industrial zone, central business district, resort district, education zone and residential zone. Oman has developed a specialized zone called the Knowledge Oasis Muscat focusing on technology development. Qatar plans to construct a development called Energy City Qatar with the aim of attracting leaders in oil and gas production, to be opened in 2010 (MENA-OECD, 2009).

In line with the rest of the world, the emerging trend in FEZ development approach in MENA is a movement away from the classical development of “free trade zone” and “export processing zones” towards “special economic zones” and “specialized zones.” In 2005, the stock of export processing zones (EPZs), special economic zones (SEZs), and specialized zones (SZs) in MENA numbered 38, 2 and 8 respectively; in 2009 the numbers are as follows: 37 FZs, 10 SEZs and 37 SZs (MENA-OECD, 2009; pp).

v. China’s Overseas Special Economic Zones
Besides increasing numbers of SEZs in its territory, China has started expanding its model to other parts of the globe with investments in economic cooperation zones’ in countries in Africa and other parts of the developing world (Baissac, 2011; cited in Woolfrey 2013). In 2006, as part of the implementation of its 11th five-year plan, the Chinese government announced that it would establish up to 50 overseas economic and trade cooperation zones. For example, Egypt Suez Economic and Trade Cooperation Zone is being developed by Egypt TEDA Investment Co., a joint venture between Tianjin Economic-Technological Development Area (TEDA) Investment Holdings, Egyptian interests, and the China-Africa Development Fund. TEDA Investment Holdings was tasked by Beijing to set up a zone project in the Suez area in 1998. A joint
consortium, Egypt-Chinese Corporation for Investment (ECCI), was set up to implement this initial project. In March 2009, TEDA won an international Egyptian tender, competing against 29 other companies for the right to develop Egypt’s first “Chinese-style” SEZ (“Chinese-style” means that part of the zone will be developed for residential use). TEDA’s investment in infrastructure and basic construction was expected to amount to between US$200 million and US$280 million.

Zambia-China economic and trade cooperation zone/Chambishi multi-facility economic zone is also another example for China’s overseas development plan. China Nonferrous Mining Co. (CNMC Group) began planning the Zambia-China Economic and Trade Cooperation Zone in 2003 in Chambishi, about 420 kilometers north of the capital of Lusaka. The Chambishi Zone focuses on the value chain of copper and cobalt: mining, processing, recycling, machinery, and service. By July 2009, 11 enterprises had been established in the zone, including the Chambishi copper mine, copper smelters, a sulfuric acid plant, and a foundry, for a total investment of US$760 million.

vi. Technopark, Turkey
The role of industrial parks in facilitating technological learning, innovation and catch-up processes is well documented in the IP literature. In this regard, a science park is an important IP in facilitating catch-up a science park or Technology Park is an organisation managed by specialised professionals. Its main aim is to increase the wealth of its community by promoting a culture of innovation and competitiveness among its associated businesses and knowledge based institutions. To achieve these goals, a park stimulates and manages the flow of knowledge and technology amongst universities, R&D institutions, companies and markets. It facilitates the creation and growth of innovation-based companies through incubation and spin-off processes, and provides other value-added services together with high quality space and facilities. The park can host technology, productivity and information centres, offering services to enterprises that are often too costly and complex when provided in an open market. Parks are thus a useful tool to establish value added links between academic research and industry.

Science and technology Park have four types of governance actors: a specialised company accountable to shareholders; a university; a public agency; and key stakeholders managed according to a statute. There is also the possibility of elected representation in which shareholder members elect a governing board. For instance, the system in Slovenia combines investment from
the government, the chamber of commerce and clusters. Another example is the Technology Park in Ljubljana, venture capital funds are important tenants within the park. Another important player is the national association of science parks and business incubators in Slovenia. The Metutech Technopark is a good example in science and technology Park (see box 7 below).

**Box 7: Metutech Technopark**

Metutech Technopark is the first and biggest science and technology park in Turkey. The park is owned by the Middle East Technical University (METU) and covers an area of 1.2 million square metres close to the centre of Ankara. The park hosts 276 companies, of which 75 per cent are SMEs. The Park can be a typical example for Industrial parks as an instrument to foster competitiveness of agglomeration economies and to promote local supply chain development.

The park provides services for university-industry collaboration, including incubation centres and pre-incubation programmes, technical cooperation programmes and property management. Other advantages are the presence of incubation centres directed at micro-electromechanical systems and telecommunications. In this model, the anchor company is located at the centre of one incubation centre and small companies surround it. This benefits both the anchor company and the small companies. The second part of the model is incubation programmes that teach entrepreneurs to prepare business plans. Another incubation programme directly targets animation technologies and the gaming sector, globally worth around US$ 20 billion annually. This is a step towards the defence industry where simulation and animation technologies have practical research applications. There is collaboration between university and industry, and financial support and advice for patent applications.

The park aims to increase global SME collaboration. Metutech is part of the Enterprise Europe Network, the biggest SME network in the world.

**4.4. Implications of experiences of specific industrial parks**

Countries develop different types of Industrial Parks to generate employment opportunities, promote and diversify exports, increase technology transfer and attract investment flows. In order to achieve the intended objectives of IPs, governments use various mechanisms to effectively implement IP development. The mechanisms range from effectively using their own comparative advantage and opportunities to providing different policy incentives. The incentives range from fiscal to regulatory such as export duty exemptions, streamlined customs and administrative controls and procedures, liberal foreign exchange policies and income tax incentives. However, the stories differ from country to country, and there are success and failure stories in different countries. Overall, the following implications can be drawn from the experiences of different countries:
First, industrial park development cannot succeed without full government commitment and support. The Suzhou experience shows that the park development might not be profitable in the short-term. It may be very difficult to expect the private sector to wait 10 or more years to start reaping the benefits of investment. Moreover, the park development is not purely a business activity that can be left to the private sector alone. It concerns a variety of stakeholders and involves administrative, political and legal decisions. Broadly perceived, it is also about urban administration. The implication is that the government should take the lead in the development of industrial parks. The experience of Shenzhen amply demonstrates that governments should be proactive and should assume a leading role in the development of IPs. The role of government will of course change over time, with greater role at the early stages and lesser role later on as the industry and sector matures over time. Private developers can also be included in this process, but the process should still be under government leadership, particularly at the early stage of SEZ or industrial park development.

Second, China has deliberately used the industrial parks and the Special Economic Zones not only as a way to generate foreign knowledge and capital but also a venue to experiment with reforms and new policies. This might partly reflect special circumstance of China starting from command economy, but the experimentation in part of a country’s geographical areas such as the industrial parks can be used for policy experiment in other developing countries including Ethiopia.

Thirdly, other countries' experience, including SEZs in China, shows that substantial local autonomy was crucial for success of industrial parks. Local autonomy to administer the parks, introduce new regulations and laws, generate finance, benefit from the tax collection etc. On the other hand, great attention and support from the higher political echelon was another important ingredient for the success of the park. For instance, the experience of Shenzhen in China shows that the central government focused more on macro-management, and rapidly transferred greater economic power to local authorities at Shenzhen SEZ to both generate revenues and spend it the way it sees fit. Local officials were evaluated based on their performance related with SEZ management. This form of administrative and economic decisionmaking autonomy has aligned the incentive of local officials with the drive to get the best out of SEZ using local level information, incentives and, more importantly, market forces.
Fourth, park development has two aspects – hardware and software systems. The hardware includes the initial plan and capital, while the software refers to good policy, procedure and methods. The software knowledge transfer was the key objective of the Chinese-Singapore partnership. The Chinese government didn’t insist on taking higher share in the SIP at the initial stage, while it was providing various resources (such as cheap land) and incentives to motivate the Singaporean side to transfer knowledge. From the inception of the partnership, there was a clear plan and institutional arrangement on how knowledge can be transferred. As a result, the Chinese had no difficulties to take over the management of the SIP in 6-7 years’ time.

Fifth, given the governance system of a country, the experience of countries shows that not only that the type of Industrial Park determines the administrative system of the Park but also that policy incentives designed to encourage investment should be made with target that can be measurable, monitored and achievable. For instance, the tenants, the administrative system and the policy incentives for Science and Technology Parks is different from manufacturing Parks.

Sixth, conscious upgrading effort was another crucial factor for the transformation of the SIP from low value added activities to high-tech industries, innovation and R&D, as well as high-end services. In this regard, the role of State Owned Enterprises (SOEs) was very important in aggressively investing in new technologies and joint-venturing with foreign companies.

Seventh, in general, the success and failure of a country’s IPs mainly depends on how the country designs and implements IP development, which, in turn, depends on such factors as the type of zone to be developed; the policy framework; incentive framework; regulatory framework; institutional framework; and the physical development and management of industrial Parks.
5. Specific Features of Ethiopia from Industrial Park Perspective

5.1. Brief Overview of the Governance System

Ethiopia adopts a developmental state model to realize its medium term vision of becoming a middle income country by 2025. In countries that adopt such a development model, the government plays a leading and active role in the development process so as to bring about structural change and transformation of the economy through prioritizing and modernizing agriculture and moving to industrialization.

In order to achieve fast economic growth that benefits the majority of their people, such states put in place transformative institutions and organizational arrangements. As result, the institutional and organizational arrangements should be formulated and structured in such a way as to give the state sufficient power to enforce its policies and hence achieve its developmental goals. The institutional and organizational arrangements should provide the state ‘autonomy’ in formulating effective policies, playing an active role in the economy, and monitoring and controlling the economy. At the same time ensure its ‘embeddedness’ to the different groups of society for their active participation and reach a consensus with them.

Such development model is reflected in the Ethiopian governance system. The Constitution of the country provides a framework for a federal system. The constitution recognizes the constitutive power of the Nations, Nationalities, and Peoples of Ethiopia. Responsibility and authority over development management is shared between federal government, regional states and local government entities (woreda and kebele), thereby ensuring that people own and take control of their development trajectory. Such shared powers range from development planning to taxation and mechanisms to ensure and protect shared responsibilities, including fiscal equalization (grant-sharing formulas). The governance system in Ethiopia also gives considerable attention to decentralization and the devolution of power to the regional governments. The Government has recognized that the basic prerequisites for development include, among others, peace and security as well as and a democratic system that ensures freedom as well as human and property rights. The Constitution articulates that all international agreements ratified by the Government are an integral part of the law of the land.
This governance system has important implications for the development of Industrial Parks in Ethiopia.

- **For stability**: Ethiopia has opened up its political space to competing political parties since the adoption of the 1995 Constitution, which assures the right to freedom of association.

- **Diversity**: Ethiopia is a much diversified country in terms of culture, religion, language, agro-ecological conditions, etc. The constitution provides sufficient recognition to this diversity, which is reflected in its federal and governance system. While the Constitution provides a sufficient framework for a federal system, Ethiopia’s African Peer Review Mechanism (APRM) Country Report (APRM, 2013) notes that, managing diversity and ensuring participatory governance has to also be achieved through establishing and strengthening symmetrical relationships between federal government and the regional states and between regional states themselves.

- **Regulation**: Each region has constitutional right and power to develop its own regulation to be functional on Parks within their jurisdiction. On the other hand, the federal government has constitutional right to regulate, formulate and implement national policies and plans; development activities implemented using federal budget in a particular region as well as those crossing two or more regional states. In relation to Park regulation and administrative system, article 56 (No. 3, 4, 8, 12, 13 and 18) of the constitution is worth exploring.

- **Taxation**: Ethiopia is a federal parliamentary republic, consisting of nine regional states and two city administrations. The collection of taxes is a shared responsibility between the Ethiopian Revenue and Customs Authority (ERCA), which collects federal taxes and has also taken over the collection of regional taxes in Addis Ababa, and the regional revenue authorities, which are responsible for collecting regional and local taxes.

The above discussions have important implications for the effective implementation of Industrial Park development in Ethiopia. Some of the issues are the following.

First, though each regional state has constitutional right to formulate park regulation and develop their own IPs, given its institutional requirement, huge investment required and absence of experience in IPD in Ethiopia as a nation, it is a big question especially at the initial stage of IPD.
Second, **administrative system** of Park: the federal system has also direct implications to administration system of park. Since IPD requires effective and efficient administrative system, which requires highly professional skills and experiences as well as commitment, how should a particular Park be administered is also a question.

Third, the federal system has also implications for **provision of land** for Park development. It is expected that IPs are to be developed in locations where one or more regional states share. While it is straightforward that the federal government should administer Parks located in areas where more than one regional states share, there is a question of ‘making the land available for development’. In this case, the regional states should take IPD as their key strategy, if the Park is to be developed in their geographical location.

Fourth, **Park security and provision of public services** such as water, wastewater, solid waste, etc services for Parks are also key issues. Basically, these public services need to be provided by local public organs, which lack the motivation and capacity of the staffs and offices. While efficiency in service delivery is a key requirement for successful IPD implementation, who should cover the cost of provision (cost of supply of the service such as salary) and how to motivate staffs at local levels need to be clear at early stage of Park development. Park security is also an important component of IPD and a key element required for the smooth operation of IPs.

Fifth, while it is clear that all taxes of federal investments are to be collected by the federal revenue and custom office, there is also question of the ‘right’ of collecting **income taxes** for local staffs. Besides, both federal and regional taxes are enacted by federal proclamations, and as a result apply equally across all of Ethiopia. However, while the tax base and applicable rates are the same, each regional revenue authority is an autonomous tax administration, and there are often significant differences in how non-federal **taxes are administered** in each region. It is therefore important to consider such regional difference in selecting the location since such difference may have substantial effect on the effective implementation of the IP.

Sixth, the governance system has also implications to determine **Policy incentives** related to IPD. Beyond the federal and regional taxes, each regional state also has the power to raise taxes and exercises this right when it comes to local taxes, such as agricultural income tax, rural land use fees and municipal taxes. These local taxes are enacted by regional proclamations, local legislation and city proclamations, and as a result tend to vary between regions. The implication is
that the cities where the initial parks are planned to be developed have the right and power to provide preferential policies that they think are more attractive to FDI. Thus, their willingness to provide such incentive can also be an advantage to select the location of the park. It is, therefore, essential to consider these issues in designing an institutional arrangement for the effective implementation of IPD in Ethiopia.

5.2. Overview of the Industrial Policy of Ethiopia

5.2.1. Background

A conscious move to stimulate industrial growth in Ethiopia began only in the mid-1950s with the formulation of the First Five-Year Plan (FFYP) that covered the period 1958-1962. Two more five-year plans, Second Five Year Plan (SFYP) and Third Five Year Plan (TFYP), were launched between 1963 and 1973. The implementation of these initiatives attracted foreign investors and gave boost to the manufacturing sector in Ethiopia, although the industrial the overall industrial base of the country remained weak (World Bank, 1985).

The military government which came to power in 1974 nationalized most of the medium and large manufacturing enterprises and declared “a socialist economic policy’. The manufacturing sector exhibited a sharp decline particularly in the first few years following the revolution. The nationalization and continued systematic restriction of the private sector from engaging in major economic activities had virtually reduced the emerging vibrant sector into micro- and small-scale manufacturing activities.

The government led by Ethiopian People’s Revolutionary Democratic Party (EPRDF) that assumed power in 1991 adopted various economic reform measures under the structural adjustment program (SAP). The SAP was implemented in three phases over the period 1992-99. Industrial restructuring that include, de-regulation, trade opening and privatization had been the key elements of the program. The aim was to shift resources into industrial sector that has clear comparative advantage over the other sectors and eliminating insufficient use of resources by public enterprises.

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55 Gebreeyesus (2013) has extensive review of the industrial policy and development in Ethiopia.
According to World Bank (1994) the favorable policy environment created by the economic reforms, coupled with macro-economic stability, revitalized the manufacturing sector and the economy in general. The high growth period, however, did not last long and economic activities and particularly exports were less diversified. In an effort to address the lack of progress in export diversification, the Ethiopian government adopted Export Promotion Strategy in 1998, which led the establishment of the Export Promotion Agency. The strategy aimed at promoting high-value agricultural exports (e.g. horticulture products and meat) and labor intensive manufacturing products (clothing, textile, leather and leather products). This strategy was; nonetheless, relatively narrow in scope (Gebreeyesus, 2013).

A full-fledged Industrial Development Strategy (IDS) was formulated in 2002/03. The Industrial Development Strategy (IDS) is based on the government’s broad development vision known as Agricultural Development Led Industrialization (ADLI). It comprises the following four key principles:

- **Strong linkage** between industry and agriculture,
- **Export oriented** sectors to lead industrial development and be given preferential treatment,
- **Labor intensive** sectors also be given priority to exploit comparative advantage and maximize employment
- **Public-private partnership**: the strategy recognizes the private sector as engine of growth, while government assuming leadership and coordinating role. It also distinguishes the ‘rent seeking’ and ‘developmental’ private sector vows to curtail the former and promote the latter.

The strategy identifies two mechanisms of government engagement with the private sector: creating conducive environment and direct support to selected industries. Next we briefly present the context of each this mechanism.

a) Creating conducive environment for industrial development

The Ethiopian industrial sector was subjected to various deep-rooted obstacles and the private sector at its infant stage given the openly hostile against private sector and ill designed policies of the preceding regime. The IDS aims to address these obstacles by way of creating
conducive environment for the private sector across the board. In this regard, it gives due emphasis to the following specific areas:

- Creating favourable situation for developmental enterprises,
- Creating stable and favourable macroeconomic environment,
- Creating modern and development-oriented financial system,
- Providing sustainable infrastructure,
- Developing industrial zones in urban areas with the required infrastructure,
- Human capital development,
- Creating efficient administration to support development and
- Creating efficient dispute resolution system.

b) Providing direct support and guidance

The second mechanism of engagement is providing direct support and guidance to investors in priority industrial sub-sectors. Textile and garment; meat, leather and leather products; agro-processing; construction; and micro and small enterprises (MSEs) were declared priority sectors in the initial industrial policy document formulated in 2002/03. This list of priority sectors has been updated through time and more industries were added to the list of priorities. For example, the sugar industry and flower and high-value fruits and vegetables were added in the PASDEP (Plan of Action for Sustainable Development and Eradication of Poverty) period (2005/06-2009/10); and the metal and engineering and chemical and pharmaceutical industries in the GTP (Growth and Transformation Plan) period (2010/11-2014/15).

The targets and accompanying government support for the selected sectors were explicitly stated in these successive five-year development plans. Accordingly, the government provided extensive support that includes economic incentives, capacity building, establishment of industrial zones, and direct public investment.

**Economic incentives:** The economic incentives for the selected sectors include duty drawback scheme, export credit guarantee scheme, exemption of duty on capital goods, and tax holidays. The government made credit available with very generous terms for investors in the selected sectors through the Development Bank of Ethiopia. It has also provided land at low prices and long-term payment period to attract investors into the selected sectors.
**Capacity building:** In addition to the efforts to increase the supply of skilled labor through the expansion of the higher education and technical and vocational training, the government established specialized training institutions for selected export sectors. These include the Ethiopian Leather and Leather Technology Institute (ELLPTI), Textile and Apparel Institute (TAI), and Horticulture Department in Jimma University. Moreover, the government has implemented other capacity building schemes including, benchmarking, institutional twining, and *Kaizen*. The benchmarking and twining arrangements are sector-specific initiatives mainly implemented in the textile and leather sectors, while the *Kaizen* is a cross-sector initiative.

**Cluster development:** The establishment of industrial zones is considered as one strategic issue for the government to promote industrial development in the country. It is also seen as one mechanism to attract foreign direct investment (FDI) and the government is aggressively pursuing this scheme. With this objective the government has taken a number of measures including furnishing the industrial estates with necessary infrastructures, organizing a responsible organ entrusted with the task of promoting and regulating this activity.

**Direct investment:** Despite continued privatization of public enterprises, the government has engaged itself in direct investment in areas where it believed are in short supply of private investment. The primary focus of government investment has been Sugar Industry, Metal and Engineering, Coal Phosphate Fertilizer Complex.56 The government has also been involved in other new or/and expansionary investment projects (e.g. textile, garment accessories, rubber tree production, cement factory, ceramics, pulp and paper) which are currently under different phases of implementation.

The government continues to deepen its ambitions of transforming the country into industrial economy by formulating a thirteen years (2013-2025) industrial development roadmap. This roadmap is based on the country’s vision of becoming middle-income country by 2025 and the experience from PASDEP and the first two years of the GTP. It aims to increase the share of the industry sector as percentage of GDP from the current (2013) 13% to 27% and similarly the

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56 Toward this the government established two state corporations; the Metal and Engineering Corporation (METEC) and Sugar Corporation. METEC was established in 2010 consisting 15 state-owned enterprises operating in the metal and engineering sector and form a large corporation, most of which were part of the defence industry. The Sugar Corporation currently consists of about four previously established state-owned sugar factories but its main focus has been on coordination of the grand investment projects of establishing new 10 sugar factories across the country.
share of manufacturing from 4% to 17% by 2025. The roadmap contains detailed strategic objectives, implementation strategies and plan, main activities, and the monitoring and evaluation mechanisms with a focus on the manufacturing sector. It also identified the strategic issues that need to be addressed, which include:

- Inadequate enabling business environment,
- Poor human resource development system and shortage of highly qualified human resource,
- Insufficient industrial inputs and infrastructure,
- Lack of well-established investment and technology development,
- Poor market diversification and development,
- Inadequate institutional support and enterprise development, and
- Weak strategic sectors development and diversification.

The industrial development roadmap identified the following five strategic programs based on the strategic issues identified above.

- Priority Sectors Expansion Program,
- New Manufacturing Sectors Development Program,
- Industrial Enterprise and Entrepreneurship Development Program,
- Local (Private) and Foreign Investment Promotion Program,
- Government (Public) Sector Investment Program, and
- Industrial Zone Development Program.

5.2.2. Institutional arrangements

National Export Development Committee, which is chaired by the Prime Minster sets export and productivity targets. The performance of the priority industry sub-sectors were also overseen by this high level committee given that most of the priority sectors are export-oriented ones.

The Ministry of Industry is the major entity tasked with coordination and implementation of the industrial policy. Various sector-specific institutes have been established or upgraded under the Ministry of Industry to oversee the development of the priority sectors (see Table 17). In this period, other cross-sector institutions such as Industrial Zone Development Agency and Kaizen Training Institute were also established to strengthen the implementation of the industrial policy.
Sector specific strategic plans have also been prepared for most of the priority sectors particularly since the formation of GTP. For example, the leather, textile, metal and engineering, agro-processing industries have formulated five-year (2010/11-2014/15) sector strategic plans based on the GTP I. These sector-specific strategic plans help to further elaborate their goals and implementing strategies.

Table 17: Sector development Institutes

<table>
<thead>
<tr>
<th>Coordinating institute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leather Industry Development Institute (LIDI)</td>
</tr>
<tr>
<td>Textile Industry Development Institute (TIDI)</td>
</tr>
<tr>
<td>Metal Industry Development Institute (MIDI)</td>
</tr>
<tr>
<td>Food, Beverage &amp; Pharmaceuticals Industry Development Institute</td>
</tr>
<tr>
<td>Meat &amp; Dairy Industry Development Institute</td>
</tr>
<tr>
<td>Chemicals &amp; Construction Materials Development Institute</td>
</tr>
<tr>
<td>Industrial Zone Development Agency/corporation</td>
</tr>
<tr>
<td>National Kaizen Institute</td>
</tr>
</tbody>
</table>

5.2.3. Performance: some indicators

Ethiopia has registered remarkable economic growth over the last decade. GDP grew by about 10.4 percent annual average between 2003/04 and 2012/2013. All the major sectors – agriculture, services and industry – grew at a similar pace. But when looking at the recent years and particularly the GTP period growth records, the industry sector grew by above 20 percent annual average, which is much higher than the growth in other sectors. However, despite the plan to increase the industry contribution to GDP to 18.8% by the end of the GTP plan period, the share remained stagnant at about 14% even in the fourth year of the GTP plan period. See figure 8.
Construction and manufacturing are the two most important sub-sectors in the industry sector. Although both have shown double digit growth over the last decade, growth in construction sub-sector has been much higher such that it has overtaken manufacturing in terms of contribution to GDP since 2004. Table 18 shows the pattern for the recent years (i.e. 2011/12 and 2013/14). During this period, average annual growth of the construction sector, at 33.5%, was more than double the growth rate of the manufacturing sector (13.3%). In 2013/14, the construction and manufacturing sub-sectors contributed about 53.1% and 30.8%, respectively, to the industrial output, which is equivalent to 7.6% and 4.4% of GDP.

The manufacturing sector in turn can be divided into small and cottage industries and medium and large scale enterprises. As can be seen in Table 18, the contribution of the medium and large enterprises sub-sector (often defined as firms with 10 or more employs) in terms of value added outweighs the small and cottage industry sub-sector. When it comes to employment, the small and cottage industry is by far the largest employment source, generating millions of jobs in contrast to the medium and large sub-sector which is estimated to generate no more than 300,000 jobs. The medium and large scale manufacturing sector is characterized by a high concentration of a limited range of light manufacturing activities such as food and beverage, textile, leather, non-metallic, and furniture. The food and beverage and vibrant industry and alone accounts for about one-third of medium and large manufacturing sector value added.
Table 18: Growth and relative contribution of sub-sectors in the Ethiopian industry

<table>
<thead>
<tr>
<th></th>
<th>2011/12</th>
<th>2012/13</th>
<th>2013/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth (%)</td>
<td>31.5</td>
<td>38.7</td>
<td>36.4</td>
</tr>
<tr>
<td>Contribution to industry (%)</td>
<td>42.1</td>
<td>47.1</td>
<td>53.1</td>
</tr>
<tr>
<td>Manufacturing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth (%)</td>
<td>11.8</td>
<td>16.9</td>
<td>11.3</td>
</tr>
<tr>
<td>Contribution to industry (%)</td>
<td>35.6</td>
<td>33.6</td>
<td>30.8</td>
</tr>
<tr>
<td>Large and Medium Scale Manufacturing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth (%)</td>
<td>15.9</td>
<td>24.2</td>
<td>14.5</td>
</tr>
<tr>
<td>Contribution to industry (%)</td>
<td>24.0</td>
<td>24.0</td>
<td>22.7</td>
</tr>
<tr>
<td>Small Scale and Cottage Industries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth (%)</td>
<td>4.2</td>
<td>1.9</td>
<td>3.1</td>
</tr>
<tr>
<td>Contribution to industry (%)</td>
<td>11.6</td>
<td>9.5</td>
<td>8.1</td>
</tr>
<tr>
<td>Electricity and Water</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth (%)</td>
<td>13.5</td>
<td>10.0</td>
<td>7.5</td>
</tr>
<tr>
<td>Contribution to industry (%)</td>
<td>9.3</td>
<td>8.3</td>
<td>7.4</td>
</tr>
<tr>
<td>Mining and Quarrying</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth (%)</td>
<td>12.7</td>
<td>6.3</td>
<td>-3.4</td>
</tr>
<tr>
<td>Contribution to industry (%)</td>
<td>12.9</td>
<td>11.0</td>
<td>8.8</td>
</tr>
</tbody>
</table>

Source: National Bank of Ethiopia 2013/14 Annual Report

A similar trend is observed when looking at the performance of manufacturing exports. In the last decade, export earnings from manufacturing sector grew by around 30% per annum. Despite this tremendous growth, the share of manufacturing export in total merchandise export continued to be insignificant. Over the past decade and half, the average share of manufacturing exports remained at less than 10%, indicating the continued dominance of agriculture exports.

The export performance can also be assessed in comparison to the targets set under GTP. According to the GTP, the target was to increase export revenues from the manufacturing sector from USD 183.7 million in 2010/11 to USD 1.82 billion in 2014/15. Exports have about doubled and reached USD 398 by the end of the fourth year of the plan period. This is far below the target: it is only 22% of the target for the first year of the planning period (see Table 19).
Table 19: Manufacturing sector export earnings performance (in million USD)

<table>
<thead>
<tr>
<th>Product type</th>
<th>Actual 2010/11</th>
<th>Actual 2011/12</th>
<th>Actual 2012/13</th>
<th>Target 2013/14</th>
<th>Target 2014/15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textile &amp; apparel</td>
<td>62.2</td>
<td>84.6</td>
<td>99</td>
<td>1000</td>
<td></td>
</tr>
<tr>
<td>Leather &amp; leather products</td>
<td>104.3</td>
<td>112.1</td>
<td>123.4</td>
<td>496.9</td>
<td></td>
</tr>
<tr>
<td>Agro-processing</td>
<td>34.45</td>
<td>51.8</td>
<td>50.8</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>Pharmaceuticals &amp; chemicals</td>
<td>6.9</td>
<td>7.0</td>
<td>7.9</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>207.9</td>
<td>255.45</td>
<td>281.1</td>
<td>398</td>
<td>1816.9</td>
</tr>
</tbody>
</table>

Source: Ministry of Industry, unpublished documents

Another manifestation of underperformance of the manufacturing sector is that its continued dependence on imported inputs. According to the GTP plan the Basic Metal and Engineering Industry (BMEI) was expected to play critical role of easing the import dependence of inputs for its own as well as the whole manufacturing sector. Figure 9 gives the import share of raw material use for BMEI and the whole M&L manufacturing sector. However, the BMEI continues to use high share of imported raw materials (above 70%). This is about double the average share of imported raw materials in the whole M&L sector and shows that the sector has so far been unable to meet expectations in terms of use of local inputs in the BMEI sector itself let alone help other sectors in that respect.. This shows that the BMEI is yet trapped in low technology and low value-added activities (Gebreeyesus, 2014).

Figure 9: Share of imported raw materials for BMEI and the M&L manufacturing sector

Source: Gebreeyesus (2014)
5.3. Key Challenges in the Priority Sectors in Ethiopia

Ethiopia’s recent industrialization drive can be traced back to the Industrial Development Strategy (IDS), which was introduced in 2002. The strategy aimed at creating conducive environment for industrial development by providing a myriad of support services to investors engaged in mostly light labor intensive industrial sectors. The industry sector in general and the manufacturing sector in particular has been accorded a significant weight in all development plans so far. In 2010/11, the Growth and Transformation Plan (GTP) has more forcefully articulated the essential role of industrial development in sustaining growth as well as driving structural transformation of the economy. More recently, the Industrial Development Strategic Roadmap charted out a plan as to how to gradually move the economy from light labor intensive manufacturing to greater value creation.

Indeed, in its PASEDP I, II and GTP, the Ethiopian government has identified several labor intensive industries as bases for industrial development and transformation. It is clear that, textile and garment, food processing, leather and footwear industries have production organization and technological intensity that suits the labor abundant-capital scarce nature of the Ethiopian economy. Notwithstanding recent progress in terms of employment and export, some of the priority sectors selected for promotion in the development plans as well as in the Industry Roadmap appear to face significant challenges that thwart their growth. The key challenges confronted by the agro-processing, leather and leather products, textile and garment, and metal and engineering services are reviewed below. While these industries form the major share of the priority sectors, our selection of, and not the other priority sector industries, into this analysis is based in the availability of research materials that have carefully examined the major challenges faced by these industries.

5.3.1. Agro-processing sector

Economists long understood that rapid economic growth is often associated with strong linkages between sectors, i.e., the stronger sectoral linkages the economy enjoys, the higher the return from the allocation of limited resources. These linkages are nowhere relevant than the connection between the agricultural sector and agro-processing (manufacturing) industry. Agro-processing
industries rely on raw materials and intermediate products originating directly from the agricultural sector to product industrial goods. Such linkages are particularly important for countries that are at early stage of development and that aspire to transform the structure of their economy from agricultural-based to industry-oriented. East Asian experience, for example, shows that gains in productivity and product diversification is associated with the gradual transformation of agrarian communities from traditional agriculture-based economy to agro-processing industries.

Ethiopia has a considerable potential to expand the agro-processing industry. Export, for example, has mostly been unprocessed and undifferentiated raw materials that leave much room for greater value addition. There are, however, several interrelated challenges faced by participants in different rungs of the value chain in the agro-processing sector that preclude upgrading. Limited access to technology, low availability and quality of inputs, high pre- and post-harvest losses, poor storage and distribution facilities, and fragmented markets are some of the challenges in the sector. As a result, enterprises in the sector are forced to to operate below installed production capacity. Even when there is adequate supply of raw materials and intermediate goods, their production often falls short of both local and international quality standards owing to rudimentary production technology and poor state of machinery and equipment. Agro-processing also suffers from informal marketing systems that do not assure proper market information, creating uncertainty on parameters required for informed decision making.

Previous studies have listed the following challenges faced by the Agro-processing Industries

- Lack of proper raw materials supply; supply of raw materials is insufficient, inconsistent and often of poor quality.
- Capacity underutilization (related with product diversification, raw materials, and market)
- Difficulty to export to developed countries such as the US and European Union (stringent safety standards and phytosanitary requirements)
- Lack of investment and working capital
- Limited reach of research and lack of appropriate institutional support (research, technology, product development, management skills)
- Limitation of product diversification & specialization
- Weak production and marketing management skills and capability
✓ Obsolete and inefficient technologies
✓ Limited linkages between producers and the export markets due to the large number of ineffective intermediaries operating in the value chain.
✓ Limited domestic market for processed products
✓ Lack of ICT and mobile applications for the rapid transmission of market information

5.3.2. Leather and leather products sector

Ethiopia is generously endowed with livestock resources. Its cattle population is more than 53 million, along with sheep and goat populations of 25.5 and 24.1 million, respectively. The USAID Agricultural Development Report (2013) stated that Ethiopia has the tenth largest livestock inventory in the world. The country has 52 million cattle including 10.5 million dairy cattle and 47 million shoats. Yet by most economic metrics, the country is yet to realize its potential arising from the huge livestock population (USAID, 2013). The leather and leather products industry is challenged by concerns of reliable supply and good quality of hides and skins as well as problems with the quality of semi-processed leather products. Below, we briefly examine some of the major problems identified by a research that carefully examined this issue (see Abebe and Florian, 2014 for detailed review of the challenges).

The two major persistent problems in the leather industry appear to be supply shortages and poor quality of raw hides and skins. While many of the tanneries have installed high level of soaking capacity, they seem to struggle to find adequate supply of raw hides and skins to operate at full capacity. The quality problem arises from traditional animal husbandry practices that consider hides and skins as byproducts of meat. Backward breeding, ranching, branding, slaughtering, and storing of hides and skins significantly reduces the quality of hide and skins. This coupled with animal skins diseases and parasitic infections limit the availability of hides and skins for tanneries.

The presence of excessively lengthy supply chain has also repercussions on both the amount and quality of skins and hides available at the market. For example, immediately after slaughtering has taken place, the raw hides and skin need to be stored properly to prevent any further deterioration of its quality. However, in most cases, hides and skins remain unpreserved until it is collected by local traders, who then apply limited preservation techniques before
transferring it to the regional trader, who eventually supply it to tanneries. Along this process, by the time it reaches tanneries, the hides and skins can easily be exposed to damage if the transfer from one agent to the other is executed without proper preservation, storage and transportation system. This problem is more serious if the animal slaughtered in a backyard, where the raw hides and skins may remain in the hands of the household for a day or more without being transferred to the trader. The establishment of commercial ranches, central market places and modern marketing systems will alleviate some of these problems related with supply and quality.

There is also a problem associated with shortages of skilled workers and managers at the tannery and leather manufacturing factories with implication on quality of products. Moreover, labor turnover appears to be high and labor productivity low with many local managers lacking sufficient technical and supervisory skills to facilitate design and production development. Moreover, the tanneries appear to enjoy protection in terms of access to raw hides and skins as well as semi-processed leather due to the export ban and tax respectively. Without proper sanction, protection alone may discourage tanneries from becoming more competitive and innovative.

Some of the other challenges in this industry appear to be the severe lack of working capital brought on by the lack of available finance, limited regulatory and enforcement capacity, barriers to international market participation and branding, limited value addition and processing capacity.

5.3.3. Textile and garment sector

According to the Ethiopian Textile Industry Development Institute (ETIDI) there are sixteen textile processing units that can process natural and synthetic textile materials of different forms using machinery ranging from state of the art technology to semi-automated machines. Seven of the sixteen plants are purely woven fabric processing units, three purely knit processing and the remaining six have a combination of both or have additional yarn and/or fiber processing facilities (ETIDI, 2015).

Although there is enormous amount of untapped potential in the textile and garment sector, the production and marketing performance so far has been disappointing. For example, the export revenue from the sector in 2013/14 was less than 16 % of the GTP target of USD 700 million. Inadequate quantity and quality of inputs, insufficient infrastructure facilities and lack of finance are some of the challenges that inhibit the sector form reaching its potentials. Related with the
production of cotton, for example, lack of improved seeds, shortage of irrigation water, shortage of labor, and prevalence of pests are major problems that reduce the amount and quality of cotton available for textile mills.

Notwithstanding a recent influx of new investment in the textile and garment industry, the majority of textile factories in the country have limited processing capacity due to their use of obsolete machineries as well as the lack of relatively skilled and trained labor and proper production management skills. In addition to these, poor quality of fabrics, low investments in equipment maintenance among SOEs, irregular fabric width and poor access to fabrics continue to permeate the sector.

Moreover, there appears to be weak linkages between cotton textile sector and the clothing sector as a result of poor quality and high price of domestically produced textile fabrics due to the inefficiency of the textile factories. The textile mills also appear to suffer from lack of technology capability and flexibility to supply required size, width, and color of fabrics. Local capacity also appears to be limited in furnishing access to qualified training institutions, production engineering support services as well as skilled labor force in production, management and marketing. Further, logistics costs related with transportation, distribution and communication are high, adding further difficulties for imports of raw materials and accessories and export of finished products.

5.3.4. Metal and engineering sector

The metal working sector carries the potential for indigenous technological progress that enhances long-term productivity in related industries (Romijn, 1999). The divisibility of production processes into a number of discrete operations and the associated viability of small size and limited requirement for high skill and resources imply that enterprises can enjoy evolutionary growth without necessarily being efficient during startup. This allows enterprises in developing countries to build greater technological capability through reverse engineering of capital goods and the employment of people that embody the technology sought. It is for these reasons that the Ethiopian government has accorded priority sector status to the metal and engineering sector. On June 2010, for example, the government has transformed the "Basic Metal and Engineering Industry Agency" to the “Metal Industry Development Institute (MIDI)” with the aim of consolidating the support systems available for enterprises engaged in the industry.
In Ethiopia, the basic metal and engineering sector includes the manufactures of fabricated metal products, machinery and equipment, motor vehicles and trailers among others. The dominant subsector is the manufacturing of flat and long steel products used as inputs for other industries such as manufacturing of galvanized coils and sheet, corrugated sheets, re-bars, hollow sections and cold-rolled coils. The second subsector is the manufacturing and/or assembly of engineering products which includes motor vehicles and trailers, electromechanical items, industrial components and so forth. Finally, the manufacturing of final steel products subsector includes production of industrial hand tools, cutlery, wires, and so forth (Sutton and Kellow, 2010). The structure of Ethiopian basic metal industries is concentrated in limited conventional downstream products such as basic construction materials (JICA, 2010). In 2009/10, the key fabricated metal products in the country were iron sheets, nails, iron bars, wires, crown cork, motor vehicle springs, doors and window frames, and ovens/stoves (World Bank Group, 2011).

The basic metal and engineering sector is heavily import substituting. Close to 85% of the country’s metal and engineering industry’s product demand is still being met by imports. The gap between local supply and demand is partly explained by the lack of iron ore smelting plants that convert iron ore into steel, ingots, slabs and sheets. Some studies have suggested that the economical extraction of iron ore is possible in some areas in Ethiopia, such as in Bikilal in Western Oromia Region. Due to the high investment requirement, however, there has not been any investment in extraction and development of iron ore.

Other critical challenges to the sector include shortage of foreign currency, electrical power outage and disruptions, cut-throat competition with similar imported products, lack of skill and coordination between different government agencies. For example, in 2009 and 2010, frequent power cuts were the main reason behind below-capacity production in the sector. A study on the supply chain of steel, engineering and assembly also showed that the sector is challenged by competition from imported products, the presence of smaller firms operating illegally in the industry, high raw material price fluctuation, high taxes imposed on spare parts and raw materials, and shortage of skilled labor and low productivity (Sutton & Kellow, 2010). Furthermore, a value chain analysis indicates the prevalence of substantial inefficiencies due to high absenteeism, high fuel and oil usage as a result of inefficiency of machine and equipment (World Bank Group, 2011).
Low levels of labor productivity, poor managerial practices and technological capacity are also major challenges particularly faced by Ethiopian-owned enterprises in the sector (Abebe, 2012).

5.3.5. Resolving the challenges: a brief summary

The Ethiopian government has identified labor intensive light manufacturing as the main pillar for the industrial transformation of the country. Government support notwithstanding, the sector is still bedeviled with a range of constraints and challenges.

Across sectors and industries, quantity shortages and quality deficiencies of raw materials are cited as major impediments faced in Ethiopia. Facilitating easy imports of raw materials through a range of monetary and non-monetary incentives and the reduction of trade barriers can stem the shortage in the short term. For this to work, streamlining and expediting the logistics process is imperative. To what extent the multi-modal logistics system has been promoting (or impeding) the speedy import of raw materials and intermediates needs to be closely examined. In the long-run, however, local capacity to produce raw materials required in the priority sectors should be built. Enhancing the productivity of smallholder agriculture, the use of contracting farming and commercial ranches with greater coordination role for the state is important to increasingly expand the quantity and quality of local sources of raw materials.

Frequent and unannounced power interruptions and outages is also one of the major and recurrent problem faced by manufacturing enterprises in Ethiopia. Anecdotal evidence suggests that problems related with power has not only significantly reduced production capacity and productivity but also has created further damages on machines and equipment of factories. While the Ministry of Industry acknowledges and strives hard to solve the power problem, the problem does not seem to go away year after year. In February 2014 alone, there were “a total of 204 cases of power cuts among eight textile factories and as a result an estimated 106 working hours were wasted” (Reporter, 24, May, 2014, citing the Ministry of Industry). Similarly, a World Bank (2014) study reports that 38% of exporters cited power problem as a major business constraints. Without resolving the power problem once and for all, much resource would be wasted and manufacturing plants would be forced to work at below-capacity levels. While abundant electrical
power is expected to be generated at the completion of Gilgel Gibe III, issues of distribution need to be well-thought out from now.

Limited processing and marketing capacity is also one of the cross-cutting problems observed in the Ethiopian manufacturing sector. To build local capacity, the international transfer of production and management knowledge to local enterprises is an important area of intervention to engender greater competitiveness and productivity. Several institutes at the Ministry of Industry, such as TIDI, LIDI and MIDI, and the Export Competitiveness Facility (ECF) are geared towards building such capability. This needs to be strengthened and important improvements still need to be made in terms of reach, relevance and depth of technology that is aimed at beefing up local capacity. Further, financing constraints that preclude the adoption of modern technology can be overcome by using DBE’s existing loan modality for fixed capital and expanding it to include financing mechanism for working capital. All these interventions can be effective only through continuous dialogue and regular information exchanges between regulators, service providers and the private sector.

5.4. Review of Institutional Arrangement of Industrial Park Development in Ethiopia

5.4.1. Role of industrial park development in Ethiopia

Ethiopia is envisaging to be an industrial and a high income country within the next four to five decades. To realize this, it adopted an Agricultural Development–Led Industrialization (ADLI) strategy and formulated and implemented successive medium term plans since 1995. Among these medium term plans, the first Growth and Transformation Plan (GTP – 1) is just ended. The next GTP – 2 is under preparation, which will focus, among other, to transform its economy from agricultural-led to industrial–led economy. The Plan will give due emphasis not only to export–oriented and labor intensive sub-sectors, but also to high tech use such as metal, chemical, etc. Industrial supply chain and clustering will be used as a key strategy to create linkage among small, medium and large scale industries.

This strategy requires sound institutional arrangements that facilitate and enhance the development and expansion of enterprises of different sizes. Currently, based on lessons from the first GTP, it is learned that the key institutional constraints that hinder the development and
expansion of large-scale manufacturing industries are capital and those related to land acquisition, customs and logistic services and low capacity and absence of coordinated effort in the development and provision of infrastructure and public services. Among these key constraints, rent – seeking behaviour in land provision and problems related to attitudes for the change in the land use pattern especially in rural areas; lack of reliable supply of road, power, telecommunication, water supply; absence of industrial effluents system; and poor provision of services in custom, visa and banking are key bottlenecks for the rapid development and expansions of the manufacturing sectors. [The experiences of other countries, which have gone through similar stages of development, reveals that Industrial Park Development is one of the policy instruments that can be used to effectively address these constraints.]

Therefore, Ethiopia aims to use IP development as a tool to catch-up and sustain development through export growth, human capital development, technological learning, upgrading and innovation and for employment generation.

Towards making IPs an effective institutional arrangement that enhances the transformational process for industrialization, the Ethiopian government has formulated an Industrial Park Proclamation. It was approved by the Parliament of the House of People’s Representative on 9th April 2015 (Proclamation No. 886/2015). The key objective of the proclamation is to regulate the designation, development and operation of Industrial Parks that attract productive domestic and foreign direct investment thereby upgrading industries and generate employment. Besides, the proclamation is made by recognizing the need to enhance export promotion, mitigation of environmental pollution, economical land use and establishment and expansion of planned urban centers through establishment of Industrial parks in strategic locations.

Accordingly, Industrial Park Development is expected to substantially contribute to the overall transformation in the structure of the Ethiopian economy. This outcome can be measured in terms of the sectoral composition of the economy, in which the share of the manufacturing output and value added in the industrial sector and overall economy accounts for a higher proportion (by ownership type: foreign and domestic enterprises). Besides, the manufacturing sector should also account for a higher share of the total employment within the next few decades. Moreover, IP should also contribute in the realization of an economy with higher and sustainable competitive capacity in the different sectors. The process requires innovative ways of
implementing industrial park development in terms of developing and managing Parks, type of park to be developed, selecting types of enterprises (sectoral wise) to be placed within the park, attracting FDI, creating linkages between the park economy and the rest of domestic economy as well as the transformation and upgrading of the park at the ‘right’ time. We will briefly investigate Industrial Parks Proclamation No. 886/2015 in this regard. 

5.4.2. Concept of industrial park in Ethiopia

One of the key issues that determine the success of Industrial Park as a policy instrument for industrialization is how the concept is defined. The proclamation defines IP as follows:

“Industrial Park” means an area with distinct boundary designated by the appropriate organ to develop comprehensive, integrated, multiple or selected functions of industries, based on a planned fulfillment of infrastructure and various services such as road, electric power and water and have special incentive schemes, with a broad view to achieving planned and systematic, development of industries, mitigation of impacts of environmental pollution and development of urban centers, and includes special economic zones, technology parks, export processing zones, agro-processing zone, free trade zones and the like designated by the Investment Board”; Proclamation No. 886/2015)

From the perspective of park’s function, the above definition shows that all kinds of Industrial Parks can be developed including comprehensive, integrated, multiple or parks with selected functions. Its concept is open, it does not restrict the function of the park with specific scopes. While it is good to have such concept, the definition may require mechanisms to prioritize the types of enterprises that can have a higher chance of achieving the intended goals. It is stated previously that in addition to the promotional work required to attract FDI to be placed within the park, the development of IP requires huge investment and effective park management. Thus, the institutional innovation for the effective implementation of IP development should consider not only the capital and human resources but also the need to give due attention to choosing the type of park to be developed or the type of enterprises to be placed within the park especially at the initial stages of its development. This is a very crucial time for transformation and upgrading at later stages of the park’s development. While some of the issues such as mitigation of the impact on environmental pollution are difficult to reverse unless addressed at the initial stages, issues like the development of urban center can be included in the master plan of the park at this stage but the actual work can be done at later stage of the park’s development.

57 Readers can refer to Proclamation No 886/2015.
The concept of IPD in Ethiopia, as defined in the Proclamation, also contains key points that are important to address the bottlenecks stated earlier in this chapter. These include not only the provision of infrastructure and the various services needed for facilitating the works of enterprises but also the provision of special incentive schemes.

**Actors in IP development**

Besides, the key institutions and actors in regulating, developing and operating the park are clearly defined and their rights and obligations are outlined. According to the Proclamation, park development, operation and enterprises are equally open to both foreigners and Ethiopian citizens in all park value-chain activities.

IP development involves a plethora of stakeholders. The key ones are the **regulatory**, **developer**, **operator and enterprises**\(^{58}\). The proclamation contains the mandates, rights and obligations of each of these key actors. The **regulators are** the Investment Board and the Ethiopian Investment Commission (EIC). The EIC ensures that the IP regulatory environment is streamlined and running efficiently. EIC reports to the PM directly. A **developer** can either be a private or public or a public-private partnership (PPP). The developer owns, finances, designs, plans, and manages development of infrastructure and facilities. It has also the right to subcontracts for discrete construction and other tasks. The **operator** manages day-to-day service provision to investors, tenants, and residents. The operator markets and leases or subleases land and/or buildings and provides solid waste removal and treatment, maintenance, security, etc.

**An overview of the roles of key stakeholders**

Table 1 below lists the major institutional stakeholders and their role in IP development. Particularly the following three are the key institutional actors:

(i) **Regulatory body:** The regulator is the Investment Board, consisting of members from different organs and chaired by the Prime Minister of the country. The Ethiopian Investment Commission ensures if the IP regulatory environment is streamlined and running efficiently. EIC reports to the PM directly and is a secretary to the Investment Board. The regulator should have sufficiently broad powers and appropriate authority to execute its mandates, which include:

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\(^{58}\) For more detail rights and obligations, see the proclamation.
Designates land as Parks,

Licensing and permitting of developer, operators, and enterprise,

Issues IP operating procedures, often in coordination with the developer,

Coordinates all public agency inputs,

Monitors and enforces compliance,

Ensures “regime integrity” and delivery,

Promotes streamlining of investor-government interface,

Controlling Site Development and Investment, and

Oversees service standards (where existing public agencies have a reputation for poor service, the IP regulator can work with them to improve performance standards, through regulations and MOUs).

(ii) **Park Developer:** A developer can either be a private or public or a public-private partnership (PPP). The developer finances, designs, plans, and manages development of infrastructure and facilities.

(iii) **Park Operator:** The operator manages day-to-day service provision to investors, tenants, and residents. The operator markets and leases or subleases developed land and/or buildings and provides or contracts for solid waste removal and treatment, maintenance, security, etc. The following table 20 briefly describes the names of institutions, mandates, roles and responsibilities. Table 22 describes the detail institutional arrangements of these actors.

### Table 20: Key IP institutional stakeholders and their roles

<table>
<thead>
<tr>
<th>Name of institution</th>
<th>Mandates, Roles and Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethiopia Investment Board</td>
<td>Strategic decisions and approval</td>
</tr>
<tr>
<td>Ethiopia Investment commission</td>
<td>Regulatory and licensing body. It also does Investment/export promotion</td>
</tr>
<tr>
<td>Industrial Park Development Corporation</td>
<td>Acts as developer, operator, leads national IP development master plan, prepare serviced land bank for private developers, enforce infrastructure provision up to the border</td>
</tr>
<tr>
<td>Ministry of Industry</td>
<td>Industry extension</td>
</tr>
<tr>
<td>Service Providers (Customs, banks, EEPCO, Ethio-telecom, etc.)</td>
<td>Services provision</td>
</tr>
<tr>
<td>Competent authorities</td>
<td>Provide public utility services</td>
</tr>
<tr>
<td>Ministry of Environment and Forestry</td>
<td>Regulates environmental impact of IPD</td>
</tr>
</tbody>
</table>
**IPs as Federal Level Development Programs**

In the current set up, while the federal government sets up vision and strategic objectives of parks, finances their construction, approves developers and tenant firms and provides services, regional governments provide serviced land (after paying all compensations) and local infrastructure. Of course, regions can also develop IPs on their own as regions are independent and can decide on their own development process, but in the Federal IP programs, their role is very limited (mostly to serviced land provision and local infrastructure). The rationale behind this seems to lie in the capacity of the federal government to plan, develop, finance and manage Industrial Park Developments. By any measure, IPs are mega projects and hence involve significant resource and capacity requirements. The provision of serviced land by the regional states can still be an issue as it has been observed in the past years. In this regard, it has been observed that the provision of land by the regional states was a key constraint for the manufacturing sector.

**Linkage of Park Economy with Domestic Economy**

The proclamation also includes articles that induce the park economy to transfer improved skills in the development and operation of Park. In this case, it requires the developer and operator to replace expatriates by Ethiopian nationals by transferring the required knowledge and skills through specialized trainings. Enterprises based within a park are also required to do the same and allow entrepreneurship training for TVET and higher education students. The Ministry of Industry is also responsible to facilitate such trainings.

In addition to the knowledge and skill transfers, the proclamation also includes an article that links the Park economy with the rest of the Domestic economy. In this case, the park operator is required to link domestic manufacturing enterprises with Industrial Park enterprises to develop their technological capacities and benefit them from international market. In addition to use of industrial clustering, the Ministry of Industry is mandated to identify best approaches for creating domestic linkages with the Park economy. The experiences of countries like China show that one of the key mechanisms to realize this linkage is through encouraging Industrial Park enterprises to use domestic suppliers as their sources of raw materials. In this case, it is also important to design special incentives for both Industrial Park enterprises and domestic suppliers. For the former, it
can be linked with tax, export and import duties, etc for the use of domestic economy as their sources of input. For domestic suppliers, it is essential to design policy incentives to improve their productivity and quality of their products so that they can satisfy the demand of the enterprises. The experience of other countries shows that such policy incentive should be linked with performance.

The proclamation also includes, among other, issues such as labor affairs, access to land and environmental protection, designation of Industrial Park, and powers to formulate regulations and directives to effectively implement the proclamation.

5.4.3. Existing industrial parks in Ethiopia

There are a few industrial parks that already started operation, and many more are under-construction and in the planning stage. Industrial parks in Ethiopia can be developed and owned by the government, foreign private developers or jointly by both (see table 21).
<table>
<thead>
<tr>
<th>Industrial zone</th>
<th>Developer</th>
<th>Location</th>
<th>Size</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bole Lemi I</td>
<td>Government/IPDC</td>
<td>15km SE of AA center, about 30 min. drive</td>
<td>156ha; 20 factory sheds</td>
<td>Fully operational</td>
</tr>
<tr>
<td>Bole Lemi II</td>
<td>Government/IPDC</td>
<td>Adjacent to Bole Lemi I</td>
<td>186ha; 15 sheds and parcels of land planned</td>
<td>Under-construction</td>
</tr>
<tr>
<td>Kilinto</td>
<td>Government/IPDC</td>
<td>20km S of AA center</td>
<td>308ha with possibility of expansion</td>
<td>Under construction</td>
</tr>
<tr>
<td>Hawassa</td>
<td>Government</td>
<td>175km S of AA, half day drive</td>
<td>270ha</td>
<td>Phase I - Fully Operational</td>
</tr>
<tr>
<td>Dire Dawa</td>
<td>Government/IPDC</td>
<td>E of AA, 300km from Djibouti border</td>
<td>1,500ha</td>
<td>Under construction</td>
</tr>
<tr>
<td>Kombolcha</td>
<td>Government/IPDC</td>
<td>N of AA near Dessie</td>
<td>1,000ha</td>
<td>Completed but has not started production yet</td>
</tr>
<tr>
<td>Mekelle</td>
<td>Government/IPDC</td>
<td>Mekelle</td>
<td>1000ha</td>
<td>Completed but has not started production yet</td>
</tr>
<tr>
<td>Adama</td>
<td>Government/IPDC</td>
<td>Adama</td>
<td>675</td>
<td>Planned</td>
</tr>
<tr>
<td>Jimma Industrial Park</td>
<td>Government/IPDC</td>
<td>Jimma</td>
<td>350</td>
<td>Planned</td>
</tr>
<tr>
<td>Bahir Dar Industrial Park</td>
<td>Government/IPDC</td>
<td>Bahirdar</td>
<td>350</td>
<td>Planned</td>
</tr>
<tr>
<td>Air Lines Logistics Park</td>
<td>Government/IPDC</td>
<td>Addis Ababa</td>
<td>200</td>
<td>Planned</td>
</tr>
<tr>
<td>Awsh Arba Industrial Park</td>
<td>Government/IPDC</td>
<td>Awash area</td>
<td>225</td>
<td>Planned</td>
</tr>
<tr>
<td>Andido Industrial Park</td>
<td>Government/IPDC</td>
<td>Andido</td>
<td>425</td>
<td>Planned</td>
</tr>
<tr>
<td>Bishoftu Industrial Park</td>
<td>Government/IPDC</td>
<td>Bishoftu</td>
<td>180</td>
<td>Planned</td>
</tr>
<tr>
<td>Asayta Semera Industrial Park</td>
<td>Government/IPDC</td>
<td>Asayta</td>
<td>274</td>
<td>Planned</td>
</tr>
<tr>
<td>Eastern Industry Zone</td>
<td>Jiang Su Qi Yuan Group (China)</td>
<td>S of AA; about 2 hour drive</td>
<td>500ha in total; 11 sheds of 10,000ha each</td>
<td>Fully operational</td>
</tr>
<tr>
<td>Huajian Shoe City</td>
<td>Huajian</td>
<td>Jemo area inside AA</td>
<td>138ha</td>
<td>Under construction</td>
</tr>
<tr>
<td>Gaizo</td>
<td>JV of Ayka &amp; Government</td>
<td>Jemo &amp; Gulale areas inside AA</td>
<td>3 factory Apartments, 4-5 stories high</td>
<td>Planned</td>
</tr>
<tr>
<td>Kingdom Linen</td>
<td>Kingdom Group (Hong Kong)</td>
<td>South end of AA</td>
<td>30ha</td>
<td>Planned</td>
</tr>
<tr>
<td>Ethio-Turk International City</td>
<td>Akgun Group (Turkey)</td>
<td>Sandafa, 35km N of AA</td>
<td>1,300ha in total, 100 ha for phase 1</td>
<td>Planned</td>
</tr>
<tr>
<td>George Shoe City</td>
<td>George Shoe (Taiwan)</td>
<td>Mojo; S of AA, about 2 hour drive</td>
<td>50ha</td>
<td>Under construction</td>
</tr>
</tbody>
</table>
5.5. Issues in Industrial Park Development in Ethiopia

While the regulation outlines the key issues that are necessary for Park development, operation and administration, there are many issues that require formulating innovative institutional arrangements that govern the effective implementation of Industrial Park development in Ethiopia. The basic notion here is that the innovativeness of this institutional arrangement basically lays on setting realistic goal for IPD and designing feasible pathways towards meeting the goal i.e. on the specific forms and mechanisms that will enable industrial Park development to effectively achieve its goal. For instance, in formulating the regulations and directives, due emphasis should be taken to facilitate the effective implementation of IP development by broadly envisaging its role for achieving industrialization in Ethiopia rather than formulating ‘prohibitive rules’ based on micro-intensions.

Accordingly, a number of issues need to be taken in to consideration while developing the institutional arrangement for IPD. While some of these issues are common, others are related to the proclamation or lack of capacity at different levels including at regulatory and implementing organs.

General issues

First, there are common issues that arise in relation to park revenue, park sustainability, earning of foreign currency, technology and management skill transfer, park transformation and upgrading, etc. These issues should be well investigated as the experiences of other countries including China shows that the host country should have clear understanding to these issues when it uses Industrial Park as a policy instrument for its industrialization. Some of these issues are related to the disadvantages of an unregulated FDI, low capacity of the host country in tax administration, lack of experiences in park management, etc. Some of the issues may be less important for parks developed and administered by government like IPDC, in which case capacity of managing the park in a market oriented manner is very crucial to minimize some of the issues related to ‘enterprises’ placed within the park. However, special attention should be given to foreign based park developers since there may be irrational behaviours that may arise related to rights for land use, revenue collection, technology transfer, management skill transfer, etc. Similarly, special
attention should also be given to foreign based enterprises as there are some risks related to tax
development through price transfer, quality of using imported input use, etc.\textsuperscript{59}

Second, there are also issues directly and/or indirectly related to the use rights given by the
proclamation on Industrial Parks (proclamation no. 886/2015). Particular attention should be given
to articles on ‘land use right’, ‘foreign currency use’, ‘skill transfer’ and ‘environmental impact’.
For instance, due emphasis is required in formulating regulation, directives and monitoring for
articles of the proclamation related to park developer, operator and enterprises including the rights
in land use (including mortgage to developed land), service provision, special incentives for tax,
custom duty and other incentives, participation in financial markets, and entitlement towards
foreign exchange borrowing and remittance. Unless these issues are addressed well through
innovative institutional arrangements, the parks may end up as enclaves that serve the objectives
of foreign enterprises using the resources of the host country. The costs associated with rent
seeking behavior that can be observed related to these articles can be minimized using a well-
developed regulation and directives as well as monitoring mechanisms. The regulations and
directives should facilitate the implementation of IP development while at the same time realizing
the specified purpose of the park through well-developed monitoring mechanisms.

\textbf{Issues related to regulatory body}

The institutional capacity of the regulatory institutions including the Investment Board and
Ethiopian Investment Commission is very crucial. For instance, while it is an essential measure to
provide overall leadership by the highest government body of the country, which shows the
government commitment for IPD, it should also be noted that the Investment Board is a collection
of top government officials or ministers. The members have specific roles and responsibilities in
their respective ministries, focused more on their ministerial leadership obligations which may
limit their effective engagement in IPD issues other than those related to their respective ministry.
Thus, IP policy and regulation issues that are critical for the success of the IPD objective may not
reviewed well technically before they are presented for decision by the Board.

\textsuperscript{59} These common issues particularly related to land and FDI are discussed in chapter 2: ‘conceptual issues in
Industrial Park development’
In relation to the Ethiopian Investment Commission, both capacity and organizational issues can be critical in regulating and implementing IPD in Ethiopia. First, currently the EIC is given responsibilities to provide permit, regulate and promote both domestic and foreign direct investment. The regulation and implementation of Industrial Park are also its responsibilities. While this is an important step to enhance IPD in Ethiopia, the organizational capacity of EIC in terms of number of qualified human resources, motivation of staffs, and organizational structure is very limited. EIC has limited capacity to design the right regulation, directives and policy incentives for effective implementation of IPD. It has also limited capacity to monitor the process of IPD implementation. Its current focus is in attracting new FDI and maintaining those currently under operation based on its ‘relationship building’ business model. While this is fundamental to enhance FDI in Ethiopia, it is also equally important to build its capacity in promoting, providing permit to IP, regulating and implementing IPD. EIC is not well staffed to perform the different activities required in the IPD (operation, promotion, legal, etc) as it is observed from its organizational structure. The available staffs have no also experience in IPD. Thus, it is essential to design an organizational capacity that enable the EIC to utilize its current capacity while at the same time build its regulatory, implementation and monitoring capacity in cost effective way.

**Issues related to IPDC**

The other issue is related to Industrial Park development Corporation (IPDC). First, as developer and operator, it should not have a ‘regulatory’ role. Its business model should be market oriented like any other private developer or operator. However, the current proclamation provides IPDC as a regulator while at the same time a developer and/or operator. It serves as a land bank for IPD in Ethiopia, which may induce inefficiency as well as conflict of interest. Second, there might also be a risk of ‘rent seeking’ behavior. This risk can originate from land development, land valuation and land right transfer. Since IPDC has no in-house capacity in land and infrastructure development, it has to outsource these functions at least for the next few years. Thus, along the procurement process and construction supervision, there might be a rent seeking action that severely harms the implementation of IPs. It can lead to delay in land and/or infrastructure development of the public IPs, poor quality of infrastructure, etc. In either case, the operation of public Parks may be delayed and, thus, affect the success of IPD in terms of attracting Park enterprises and delay in industrialization. Third, not only that IPDC is a new organization but also
that IPD is a new phenomenon in Ethiopia. Thus, there is lack of experience in administering and managing both the corporation and public Parks. Particularly, the administration or operation of Parks is new to its Ethiopian staffs, and the domestic market may not supply the required manpower. This certainly affects the effective delivery of services for Park subjects, unless IPDC provides attractive incentives to the limited capacity available in the country or hire foreign Park operator to administer the Park as a business entity. Due to lack of experience, there might be also risk of ensuring sustainable sources of resource for the Public Park by IPDC. There may also be weak promotional work to attract the ‘right’ enterprises into public Parks due to lack of experience.

The other crucial issues that need to be given due emphasis is risk of developing a Park which is ‘enclave’ that unable to meet its pre-determined targets in creating linkages or transferring technology or management skill. In this case, the role of the Park operator is very crucial. There is also risk of providing inefficient services to Park subjects due to weak or absence of well integrated or coordinated administration system in Public Parks. This may happen if the administrative body of a Park has not full power and professional capacity to make effective and timely decision rather than delaying. It may also happen if the administrative body (the final decision making body of the Park) are not selected based on their level of commitment, managerial capacity and/or members are not from the right institutions.

**Issues related to private park developers**

The other issue is related to private developer. Ethiopia allows public, private and joint venture arrangements for IP developer. While some of the key issues from a Public developer or operator have outline above, it is also important to outline risks associated with Private Park developer. First, one of the risk from Private Park developer is risk of irrational behavior in land use right. In this case, the developer may provide share to acquire resources for Park development but actually may not implement it. It may also obtain loan from financial institution (bank) using the land as a collateral but may not repay due to various reasons including due to lack of revenue, poor strategy for designing sustainable sources of resources and inherited rent seeking behavior of the developer. Second, the private developer may set higher price to sub lease the developed land to Park enterprise. Third, he/she may not appropriately mortgage the Park. Fourth, there is also risk of capital flight.
Issues related to Park enterprises

In relation to Park enterprises, some of the risks are described in detail in chapter two of this report. They are mainly related to risk of price transfer, irrational behavior in tax, importing out dated machine or technology, lack of motivation in transferring technology and management skill, etc. One of the key issue in importing out dated technology is that enterprises may import obsolete machine but attach higher value as new brand so as to either minimize its profit tax (over invoicing) or increase its asset value for bank loan. There is also under invoicing in export outputs or under reporting outputs. The other important issue is the industrial relation between employees and employers. These and other related issues require innovative institutional arrangement to effectively implement Industrial Park development in Ethiopia.

Issues related to local public utilities

The other issue is related to service provision by a public utility. One of the key benefits of IPD is increasing firm competitiveness by facilitating the provision of service and infrastructure to Park enterprises. Services such as water, power, wastewater treatment, solid waste disposal, custom, telecommunication, internet, etc are normally provided by local public offices in Ethiopia. The field visit to Eastern Industrial Zone, Bole Lemi and other offices shows that the provision of these services is extremely low. This is mainly due to lack of motivation and rent seeking behaviours from local staffs, lack of capacity as well as slow decision making process. Besides, there is also problem associated with tax including unclear tax standards, poor tax collection and corruption by local staffs. This also creates inefficiency for Park enterprises, and thereby jeopardizes their competitiveness.
<table>
<thead>
<tr>
<th>Indicator</th>
<th><strong>Actors in a park</strong></th>
<th><strong>Operator</strong></th>
<th><strong>Enterprise</strong></th>
<th><strong>Remark</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business status</strong></td>
<td>Developer</td>
<td>Operator</td>
<td>Enterprise</td>
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<tr>
<td>Profit making</td>
<td>Profit making</td>
<td>Profit making</td>
<td>Profit making</td>
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<tr>
<td><strong>Ownership (sectoral)</strong></td>
<td>Public (e.g. IPDC); Private (e.g. Eastern China IZ); Public – private</td>
<td>Enterprise</td>
<td>Public; Private: Public – private</td>
<td></td>
</tr>
<tr>
<td><strong>Function/Rights</strong></td>
<td>Design, Construct, Developing IP</td>
<td>Operate, Maintain; Promote (the respective <strong>Institutional arrangements apply</strong>)</td>
<td>Engaged in manufacturing Service provision (the respective <strong>Institutional arrangements apply</strong>)</td>
<td>Possess developed land under the IP through sub lease or renting or building a factory</td>
</tr>
<tr>
<td>Exploit, Provide services</td>
<td>Sell/rent its immovable assets</td>
<td>Enter into contract/agreement to develop &amp; provide service</td>
<td></td>
<td></td>
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<tr>
<td>(The respective <strong>Institutional arrangements apply</strong>)</td>
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<td>Sell/rent its immovable assets</td>
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<tr>
<td><strong>Ownership (Nationality)</strong></td>
<td>Foreigner, Domestic, Joint venture</td>
<td>Foreigner, Domestic, Joint venture</td>
<td>Foreigner, Domestic, Joint venture</td>
<td></td>
</tr>
<tr>
<td><strong>Rights</strong></td>
<td>Employ staffs Participate in financial markets Collect charges and fees for its service Enjoy tax and custom duty exemption Has the right to mortgage its developed land/immovable/movable assets to obtain loan</td>
<td>Transfer developed IP land on sublease Let/sublet immovable assets; Provide utilities &amp; other services on behalf of developer on charge Has the right to mortgage its developed land/immovable/movable assets to obtain loan</td>
<td>Possess developed land under the IP through sub lease or renting or building a factory Has the right to mortgage its developed land/immovable/movable assets to obtain loan</td>
<td>Details of IP land site registration; plot leasing; subleasing; site development, construction, safety &amp; supply of utilities shall be specified in the regulation</td>
</tr>
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</tr>
<tr>
<td><strong>Obligation</strong></td>
<td>Construct immovable property, on-site infrastructure, office space, etc May not transfer a leased &amp; developed IP land to third parties, except to an IP enterprise, without a written permission of the Board</td>
<td>Link domestic manufacturing enterprises with IP enterprises Adhere to institutional arrangements</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Access land</strong></td>
<td>Acquire land through lease system and transfer through sublease</td>
<td>Possess and administer, up on approval by the Board, the IP land, which he has acquired through agreement from IP developer</td>
<td>Obtain land with in IP land through agreement from IP developer or IP operator</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>May possess the land within IP land upon approval and issuance of investment permit by the commission</td>
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</table>
6. Lessons and policy suggestions for Industrial Park Development in Ethiopia

Based on the review of concepts of Industrial Park, the experiences of SEZs in China and other countries, and specific features of Ethiopia, the following key issues are suggested to be considered in the implementation of Industrial Park development in Ethiopia especially at initial stage.

6.1. Clear understanding of the concept of Industrial Park in Ethiopia

(a) Successful cases of industrial park development, including China, show that Industrial Park Development needs to be aligned with the overall development strategy of the country, but may have a different institutional arrangement from the rest of the domestic economy. The lesson from China’s SEZ development and other countries shows that the implementation of SEZs has been done as part of the overall development strategy of the country, rather than as stand-alone strategy. Therefore, it is good to start [START DOING WHAT? SPECIFY] with the overall development strategy of the country so as to have a clear understanding among all key stakeholders in the implementation of IP development.

Needless to say, Ethiopia is a democratic developmental state. At the core of this thinking, the legitimacy of the state is measured based on a development outcome that is rapid and broad-based. This fundamentally requires the state to play a leading role in setting development goals; institutional and organizational arrangements that can deliver the predefined development goals; and both the state and market to play complementary roles. This is perfectly reflected in the overall ADLI strategy of the country, and the medium term development plans including SDPRP, PASDEP, GTP I, and expected to be also reflected in the coming five years of GTP – II. As clearly stated in the ADLI, the overall development goal of the country is to industrialize in the long term by adopting a development strategy that links development of the agriculture sector with industry, and build a modern service sector that can provide effective and efficient support to facilitate industrialization.

One of the key lessons from SEZs is that Industrial Park Development is one of the major policy tools for rapid industrialization, which Ethiopia has already highlighted in its GTP. It is absolutely essential to have clear understanding of the fact that Industrial Park development is part of the overall economic strategy of the country, and implemented together with other complementary
strategies, and can have substantial contribution in achieving the long term objectives of the country by facilitating industrialization. Its success requires an innovative institutional arrangement by which, if implemented effectively, key development constraints for industrialization can be efficiently overcome.

(b) **Ensure that the key constraints to be overcome using IPD are identified, with clear expected overall objectives and benefits from its implementation.** One of the key lessons from SEZs in China and other countries like South Korea and Singapore is that IP is implemented to realize predetermined objectives and benefits by overcoming systematically identified constraints. Likewise, it is essential that Ethiopia’s policymakers and implementers have clear understanding of the key constraints to be addressed using IP, its objectives and expected benefits. In this respect, it is clear that notwithstanding remarkable economic growth that Ethiopia achieved in the last one decade, there has been limited structural transformation. The key constraints that hinder the fast transformation of the economy can be seen from the perspectives of the major bottlenecks toward overall industrialization and specific implementation level constraints. The key constraints for industrialization and transformation are the lack of capital, foreign exchange, and knowledge. From the point of view of constraints specific to the manufacturing sector, rent – seeking in land provision and problems related to attitudes towards change in the land use patterns; lack of reliable supply of roads, power, telecommunication, water; absence of industrial effluents system; and poor provision of services in customs, visa and banking were especially important.

Lessons from other countries including China show that these are typical constraints observed in a country at its early stage of economic development and during economic transformation. Industrial parks have immense potentials to overcome these constraints. Recognizing this, Ethiopia ratified the IP proclamation on 9th April, 2015 to overcome the key constraints standing in the way of the rapid structural change.

While addressing these constraints is an important step to transform the economy, it is also equally important to have clear understanding regarding the contribution of IPD towards the overall objectives of industrialization. In line with this, the proclamation clearly states that the main objective of IP development is to catch-up and sustain economic development through export growth, human capital development, technological learning, upgrading and innovation and employment generation and all these are to take place in the context of green development path.
In realizing these objectives, the development of Industrial Parks should focus mainly in mobilizing foreign capital, technology and spillover effects, increasing export earnings and generation of employment through attracting foreign direct investment as well as encouraging the domestic investment. While FDI is instrumental in realizing these objectives, the technology transfer and spillover effects cannot be realized without dynamic domestic entrepreneurs. The expected benefits from IPD will be ‘higher share of the manufacturing output and value added in the industrial sector’; ‘higher share of the industry sector in overall GDP’; ‘the manufacturing sector accounts for a higher share of the total employment’; ‘an economy with higher and sustainable competitive capacity in the different sectors in the international global value chain within the next few decades’; and ‘an economy with a net zero carbon emission rate’.

The experiences of China and other countries revealed that these benefits are achievable, and thus, it must be clear that the effective implementation of IPD is measured against these benefits continuously. Of course, some of the benefits, such as higher employment and export earnings, would emerge rather quickly and hence the evaluating of IP effectiveness can start within few years. Some of the other benefits related with IP, such as structural transformation and sectoral linkages, Hirschman type of production linkages, for example, may take time for their benefits to be revealed. However, it must also be clear that it requires innovative implementation mechanisms in which all actors work towards achieving these common goals.

(c) **Strong commitment among all political and government leaders.** One of the fundamental reasons for the success of SEZs in China was strong commitment among China’s political leaders and top government officials, especially at early stages of SEZs development. As stated above, two fundamental issues are worth considering in IPD in Ethiopia: IP’s objectives and benefits as well as its special institutional arrangement. Once there is clear understanding and consensus among all political and government leaders on the objectives and benefits of IP, it must also be clear that its implementation mechanism should be designed with the fundamental concept that it can realize these objectives and benefits.

It should, therefore, be clear that the commitment of the top political and government leaders is reflected in the following two actions. First, recognizing and designing special institutional and organizational arrangements that are innovative and unique may run into conflict with the existing regulations in the rest of the domestic economy that govern its effective implementation. Since IPD is considered a major instrument for attracting FDI, the presence of
foreign ownership in the economy may stand in conflict with some of the existing laws concerning areas of investment, land acquisition and property management. Moreover, there may be Parks wherein all enterprises are foreign based, in which case the Parks are special entities and places in the host country but largely owned by foreign entities. For these reasons, it requires innovative ways of implementing industrial park development so as to realize the benefit. In this regard, the type of park to be developed, ownership, administration, designing policy incentives and monitoring and supervision are few among the many key issues that should be considered in designing its institutional arrangement. Second, it is absolutely important to ensure that there is strong level of commitment for effective implementation of IPD among all implementing actors at different levels including federal, regional and local government leaders and public offices.

The question is, then, how one ensures the required level of commitment at different levels. From economics perspective, the question is ‘what should be the incentive mechanism for actors to exert the required level & successful effort towards the effective implementation of the IPD, which is commitment?’ All economists agree that designing appropriate incentive is the best instrument to individually exert the required level and a successful effort. The appropriate forms of incentives can originate from materialistically self-interest and/or moral motives of individuals. Ethiopia adopts a developmental state paradigm. The Late Prime Minister Meles Zenawi argued that a government that is developmental in its ideological thinking constitutes individuals with ‘Materialistically self-interest’ and ‘Moral value’ in their motives. According to Meles, such states can realize their development outcomes if and only if they have the capacity to balance such individuals in their government. Following his idea, we can identify different incentive mechanisms to develop strong commitment among the different actors. First, political incentive can be used to provide incentives to committed leaders and implementers. This can be the ‘use of individuals who have already strong incentive just because they have developed long term moral value to see a prosperous country through the implementation of the current political ideology’. For such individuals, the incentive is to see ‘their party’s strategies or plans, to which they are committed, get implemented and goals achieved’. These are commonly top political leaders and, thus, the appropriate incentive for their commitment is the effective achievement of IPD’s objective, and thus, they can exert the maximum possible effort to its implementation, given their leadership capacity. The second type of political incentive is the ‘promotion in political or government position’ based on their achievement on measurable and predefined targets. This
may be appropriate for political or government leaders at regional or middle level who play crucial role in the implementation of IPD on the ground. Thus, it can be used for individuals who are given the assignment to implement at Industrial Park level.

On the other hand, it is expected that along the implementation process of IPD, there are individuals, whose motive is primarily materialistic, and play crucial role in its effective implementation. However, it requires designing appropriate incentive mechanisms for these individuals to play a significant positive role along the process of IP implementation. Otherwise, if appropriate incentive mechanism is not designed, these individuals can retard or sabotage its effective implementation, though it is not impossible to make any correction with high cost of identification and enforcement. Whether such incentive is economic, political and/or legal, it should award those who perform well and punish those who deviate from the norm. This means that incentives at different levels should be designed and awarded based on the effective performance of predefined targets, which sum up to the successful achievements of the overall objectives of IPD in Ethiopia.

While it is essential to ensure leaders and actors at different levels have the required level of commitment, it should also be noted that it differs depending on the weight of each target. For instance, while commitment at top government and political leaders should be measured based on the overall achievement of predefined goal of IPD, for middle or lower levels, it should be measured based on the effective implementation of the specific targets of each park or actors in a park.

While the above incentive is related to individuals involved along the implementation process of IPD, it is also essential that incentives can also take collective forms. For instance, because of the country’s constitution, regional states also play a crucial role in industrial park development in the country. Thus, they should have incentive to provide the required level of political and institutional support for parks to be developed within their respective regions. Though it is clear that employment benefit is one of the advantages that the region can obtain from the Industrial Parks located in the region, it is also essential to recognize that ‘ownership’ is an important political incentive for regional states to provide the required support. If they own it, they can take IPD as their strategic action and obtain a political benefit from it. One way of developing ownership is, thus, to involve regions as a regulatory body of IPs implemented within their borders. In this regard, it is advisable to include regional presidents as members of the Investment Board.
Ethiopia is developing IP to benefit from the rent created from it while enterprises select Ethiopia’s Industrial Parks to meet their objectives. There is transaction or business between the two sides. Along the process, rent seeking behaviour can develop depending on the level of information acquired from both sides and the ability to identify actions that develop rent seeking behaviour and enforcement capacity especially from the host country’s side. Thus, it is also essential to design appropriate incentive mechanisms to key IP actors including park developers, operators and enterprises based in the Park so that Ethiopia can avoid rent seeking while at the same time realize the expected benefits from IPD. This requires both Ethiopia’s bargaining power to attract these Industrial Park actors, and at the same time minimize potential rent seeking behaviour from these actors.

6.2. **Explore the domestic comparative advantage and international opportunities in IP development:**

One of the key lessons from China’s SEZs is its ability to exploit its comparative advantage at each stages of SEZs development. Similarly, Ethiopia’s focus on the light manufacturing through the industrial park development is justified on the grounds of its current endowment structure. This is manifested by its cheap and abundant labor resources, availability of easily trainable skilled manpower, lower energy price per unit, political stability, rich raw material resources such as livestock, diversified agro-ecological zones suitable to grow different kinds of industrial crops such as cotton; and varieties of tourism products including wild life, historical, cultural, water lakes, mountains, and so forth. In addition, its geographical location is very strategic for international marketing besides its domestic market potential. It can be a strategic place for Park Enterprises that target Africa, Europe and Asia for their product market. These endowment factors can make Ethiopia an attractive place for IP investment especially for light manufacturing sectors.

Given that comparative advantage is dynamic that need to be built with a long term vision and plan, its current level of comparative advantages can be important input both to attract foreign investment and build its bargaining power in designing its IP development model. For instance, China developed the Economic and Technology Development Zone (ETDZ) to make use of its prevailing comparative advantage during the initial stage of SEZs development.

Besides, Ethiopia also aims to learn and use advanced technology to catch up. That is, it should also use IPD to acquire more advanced technology and lay the foundation for accumulation
of knowledge that would over time tip the comparative advantage of the country in favour of knowledge intensive sectors. In this case, high tech Parks such as Science and Technology Parks are also worth considering at this early stage of IP development. This is mainly due to the fact that there are opportunities to attract talents and incubate individuals and/or firms interested in high tech sectors such as ICT and also learn fast from the existing international practices and, thereby, speed up the catch up process towards modernization. Therefore, Ethiopia can also make use of the current international opportunities such as advanced telecom technology and green development in its Industrial Park development. Thus, while policy preference is an element of the institutional arrangement to realize a pre-determined target, it is also advisable to recognize that the ability of the country to exploit these advantages and opportunities is very crucial in maximizing the benefit from IPD. This capacity is reflected, among others, in the nature of industrial parks to be implemented in the country.

6.3. **Clear definition of the ‘Nature of Industrial Parks’:**

The lesson from SEZs in China and other countries such as South Korea and Singapore shows that a country that aims to use IP as a policy tool must have a clear definition for its IPs. This is mainly due to the fact that the nature of the park determines the kind of IP investment permitted to developer, operator and park enterprises. Thus, based on the key issues that fundamentally determine the nature of IP, we strongly suggest that due consideration should be given to the following:

a) **Clear objectives of parks:** The lesson from China’s SEZs and others shows that each park has specific objectives, which are derived from the country’s overall development goals. In addition, selection of park industries is done based on the strategic consideration of the country, international trends and local conditions. Each generation of park’s also had specific objectives, which is determined based on China’s ‘incremental’ reform strategy. For instance, the first generation of SEZs focused on labor-intensive Industries; which was followed by Parks focusing on IT, telecommunication, and consumer-electronics. The main aims of SEZs that started in early 2000 were to experiment entry into WTO and fully participation into global economic integration. The key lesson from SEZs is that it is essential for Ethiopia to have a clear strategy on the key patterns of Park development starting from its initial stage. This pattern can be seen from the point of view of park specific objectives.
Defining the nature of IP will help determine the types of park (e.g. specialized/comprehensive; economic/eco-IP), types of industry (manufacturing, high tech, service, etc), types of enterprises (textile, leather, agro processing, consultancy, etc) which will be based within the park, and the types of products produced (manufacturing, service, knowledge). This information, in turn, helps in the design of land and infrastructure development and area of focus in park management, which, in turn, are essential to use resources efficiently both in land size determination, energy and cost of infrastructure investment. More importantly, it gives clear information on the expected direct benefits for decision makers enabling them to make informed decision. The expected direct benefits of IP development in Ethiopia include technology and management skill transfer, employment, capital attraction through FDI, export promotion, improved competitiveness and efficient and sustainable resource utilization. Realizing these benefits can ensure accelerated and sustained industrial growth that enables to achieve industrial structural transformation in the economy and increased industrial incomes. However, this requires carefully prioritizing and selecting sectors that can provide market signals to park developers and foreign and domestic enterprises to be based within the park. Sectoral objectives, the country’s comparative advantages and international opportunities described above can be used to prioritize sectors, in addition to targeting policy incentives. For instance, Ethiopia can give priority to enterprises that are labor intensive; have strong link with the domestic economy either vertically and/or horizontally; are export oriented; can improve production and productivity capacity; save foreign currency; etc. 

Accordingly, it is strongly advisable to give due emphasis to enterprises focusing on the production and export in Agro processing, Textile and Leather and Leather products. IP can be used to improve productivity and production in such labor intensive sectors. Furthermore, most of the expected direct benefits including employment and expansion of export earning can be realized with the current endowment structure the country owns and with appropriately designed policy incentives that link the Park enterprises with the domestic supply chain.

The other important potential industry that can be given due emphasis during the first generation of Parks in Ethiopia is steel and engineering industry. This sector is essential not only as a final product by itself but also because it can improve the productivity and production capacity of the sectors mentioned above by supplying spare parts for them. While its direct
benefit in saving the foreign currency requirement of the country is well acknowledged, it can also create job and expand export earnings by improving the capacity of sectors such as agro processing, textile, Leather industries, etc.

It is also strongly advisable to establish Science and Technology Park starting from the initial stage of Industrial Park development in Ethiopia. This is mainly because of the opportunities from the sector’s international development stage, which Ethiopia can easily utilize. *Science and Technology (S & T) Parks can play crucial role in facilitating technological learning, innovation and catch-up processes.* These parks can host technology, productivity and information centres, offering services to enterprises that are often too costly and complex when provided in an open market. Parks are thus a useful tool to establish value added links between academic research and industry.

Experience of other countries (e.g. Taiwan) shows that attraction of talents (mainly of Ethiopians in the diaspora or currently living in the country), incubations and creating linkage with Research and Development can be given due emphasise at these early stages of Science and Technology Park development. In this regard, Science and Technology Parks can mainly concentrate, for instance, on research and development to overcome production and process problems faced by light labor intensive manufacturing enterprises. The existing development institutes such as LIDI, TIDI, MIDI, etc can set up their workshop in the Parks, and thereby, facilitate technology learning and innovation in improving their capacity by creating linkage with the manufacturing enterprises. Besides, S & T Parks focusing on the support provision in fast growing sector such as ICT, Clean-Technology and creative industries can also facilitate the catching up process. However, it is important to note that the governance modality of S & T Parks is different from other types of Parks such as manufacturing industrial Parks.

In addition to considering the above issues, Ethiopia can also take into consideration environmental and climate change issues in determining the type of parks to be established. In this regard, the experience of other countries including SEZs in China shows that it is absolutely important to consider environmental issue such as pollution in IPD in Ethiopia. For instance, Eco – Industrial Parks are gaining price in recent trends of Industrial Park development. This is mainly because such Parks demand resource utilization and environmental protection, which requires efficiency in resource reduction (source and/or pollution reduction), reuse (use of wastes as product or as components of other product) and
recycling (direct use of wastes as raw materials, or waste regeneration). The development of such Parks is also in line with the development strategy of the country as stated in its CRGE strategy. In this regard, we suggest conducting further studies on the best model to develop an eco- or green-Industrial Park.

One of the key benefits of Park development is the facilitation of custom and logistic services, which currently is the key constraint in the manufacturing sector in particular and enhancement of industrialization in general. The experience of China’s SEZs shows that the country established Custom Special Supervision Zone (CSSZ) a decade after the first generation of SEZs were established. The country gained experience for its relevance lately. Among the different CSSZ, Bonded Warehouses and Bonded Logistic Parks are two of the Parks whose aim is to facilitate logistic and custom services to attract foreign enterprises so as to develop export oriented economy. The lesson shows that Bonded Warehouse is of two kinds. The first kind is the warehouse that especially stores bonded goods and the goods without passing customs procedures. The second type is Export Supervised Warehouse stores, which give the same service but only for goods that passed customs procedures both for export distribution and domestic transformation. The second type also provides services such as bonded logistics distribution and negotiability value-added services. On the other hand, Bonded Logistic Parks aims to fill the gaps between Bonded Zones (Free Trade Zones) and Ports by integrating policy advantages of the two.

It is therefore, advisable for Ethiopia to establish Custom Special Supervision zones especially in Export Processing Zones (EPZ) at two points: points of entry and exit so as to enable supervision of the import and export sector. In this case, custom office should be open both at points of import and export. Besides, we suggest that Ethiopia to consider Bonded Logistic Park, which has advantage to facilitate logistic services so as to improve efficiency in operation of Park enterprises. In this case, Ethiopia needs to reconsider the existing investment proclamation (regulation number 269/2012), which does not allow the participation of FDI in the logistic centre. Relaxing this regulation to allow FDI to participate in the provision of logistic service in selected Industrial Parks can be a useful experiment that will provide insight into the effectiveness of Park and how it influences their performance overtime.

Finally, based on the above suggestions, comprehensive parks (Mixed Parks) can be appropriate, which requires selecting park development where enterprises that can share
resources can be placed in the same park. Specialized parks (sector specific Parks) is also worth considering especially for Science and Technology Parks.

b) **Appropriate park location:** The location of a park plays a crucial role in the success of IPD. Unless the location is well chosen, an industrial park may fail to attract many firms. The size of the plots of an industrial park and its cost must also be in accordance with business and market needs and expectations. More specifically, industrial parks need to be easily accessible to infrastructure such as a ports (airport, dry port, sea port), and road/railway transportation, reliable supply of power and utilities, and the nearest urban centre. Besides, labor availability, a large supply of human resources at a reasonable cost, and facilities for quality of life and personal/cultural services should also be considered in selecting park’s location. In addition to considering environmental issues, it is also advisable to take in to account IP development as an integral part of urban planning in selecting Park location. It is also advisable to select Park location that can strengthen two or more regional states so that there will be spill over effects from a relatively developed to less developed regions. In this case, locations around boundaries of emerging regions and the four bigger regions may be better criteria to select Park location. In this case, Ethiopia can use IPD for realizing its vision of ‘building a one political economy society’.

c) **Reliable sources of strategic resources of park:** the return from IP investment is realized after some years of continuous operation, and thus, the sustainable operation of IP is essential to realize the expected benefit. One of the key elements for the sustainable operation of an IP is its financial resources. There are different sources of funding for IP which vary depending on the stage of the park. These sources could be government, private investor, financial institution through loan, etc. At the initial stage of park development, during which there is shortage of finance for land and infrastructure development, a joint venture can be used. For instance, CHJ, a park specialized in Science & Technology Industry, in China, used a joint venture system to speed up the park development and foreign capital. The Shareholders of the park were Shanghai Caohejing Hi-Tech Park Development Corp (65%), Dong Yin Development (Holding) Limited, Hong Kong (15%); Kiu Fai Company Limited, Hong Kong (10%); and China Orient Asset Management Corp (10%).
Another example is Suzhou SEZ. At later stages, its main sources are the revenue the Park is collecting from enterprises based in the Park from the developed and transferred land, financial market, etc. It is therefore, advisable to consider a joint venture IP development, which can be either public and private or private foreign and private domestic. In this case, the Ethiopian diaspora can play a key role, especially at early stage of IP development.

d) **Master plan of the park**: a park should have a master plan that contains High standard, multifunctional and all-in-one design of the required elements within the park (shed, office, road, residential houses, etc). For instance for a manufacturing park, the master plan should at least clearly indicate the different park elements including spaces for manufacturing, residential facilities, landscaping and emergency. The experience of SEZs in China shows that high and far sighted planning covering all kinds of issues such as industry, transport, and urban is crucial for the success of IPs. Resources and environmental issues also need to be taken into account in the planning. Thus, it is important to consider current and future key elements of IP in designing a master plan since for example, the IPs that are chosen now in Ethiopia are most likely to grow to the level of metropolitan cities in the near future.

e) **Clear description of the working environment of the park**: since parks should be sustained at least for periods until they recover the investment committed to them, it is essential the park developer has a clear strategy on how it sustains the park’s operation; resource conservation in a way that is environment friendly; provide a customer – oriented, good working environment for park subjects including park security.

f) **Linkage between park enterprises and domestic economy**: Among the different benefits of IPD, improvement in domestic productive capabilities through technology transfer, modern management skill and spill over effect to the domestic firms are fundamental. Thus, the host country should ensure that these benefits can be realized through effective institutional arrangement. Moreover, industrial parks fully owned by foreign enterprises are parks of foreign countries located in Ethiopia, and thus, unless the host country designs appropriate mechanisms to obtain the required benefits, their economic activities are fully benefiting their country of origin. Besides, as the existing comparative advantages of Ethiopia become no more
attractive at some time in the future, these enterprises may relocate to other countries unless other policy instruments are used. Therefore, it is the domestic enterprises that are ultimately important sources of sustained economic development and sources of strategic resources for the park to operate sustainably.

g) The lessons from SEZs in China and other countries show that it is essential to design appropriate institutional arrangements or policy incentives to create domestic linkages. These include, but are not limited to, the following:

- Co – location of foreign and domestic enterprises in the same park for spill over effect in working practices, learn management skills, etc.
- Special and targeted policy incentives for park enterprises for their actual initiatives such as in capacity building through on-job training;
- Special policy privileges for pre-determined targets and period for Park developers or Park enterprises which have innovative production and marketing linkage mechanisms to build local productivity or marketing capacities; e.g. textile enterprises provide credit to cotton producers, improved technology for livestock productivity improvement, etc;
- Design program support to improve and/or strengthen production, productivity and quality of domestic firms (such as SMEs) to interact with park based firms in supply chain; e.g. programs to improve livestock production, productivity and distribution of skin and hides can be an effective mechanism to link park enterprise in leather sector with domestic economy.
- Encourage park enterprises to work jointly with Ethiopian counterparts. Technology transfer and spill over effect cannot be realized without dynamic domestic entrepreneurs. As stated in the industrial policy encouraging domestic investors into the manufacturing sector is another objective. It is therefore, essential to design mechanism to create and encourage joint venture between Ethiopian diaspora and foreigners. For example, this can be done by systematic documentation of database to provide the required information to link both foreigners and Ethiopians. It is also a good mechanism to encourage park enterprises to use domestic labor for certain activities of the enterprises.
Ensure that industrial parks are not ‘enclaves’: One of the benefits of FDI is improvement in productive capacity of domestic firms through the spill over effect. However, since the evidence on this is inconclusive, it is essential to give due consideration to IPs not to be ‘enclaves’, a case in which, for instance, when all enterprises are foreign based, all inputs are imported or locals engage in simple assembly. The lesson from the experience of other countries shows that countries that regulate and/or use appropriate policy incentives based on performance can benefit from FDI. These countries usually consider requirements such as, technology transfer, local content in input/product or exports. For instance, performance based on share of local inputs used by Park foreign enterprises can be used to create linkages. In this case, it is good to note that spill over effects can come from hiring local workers for them to learn new skills; buy inputs from local producers who may pick up new technologies in the process; through demonstration effect on domestic firms by showing them new management techniques; or providing knowledge about overseas market.

6.4 Recognizing Industrial Park development as an experiment and a learning process
China also used SEZs to experiment national reforms to open the economy. SEZs allow for testing and experimentation of policies before they are widely implemented. If the new policy is successful during its experimentation stage, then, based on the experience obtained, it used for national reform. Ethiopia can also adopt a similar strategy in the development of Industrial Parks.

First, there are some fundamental issues that require major policy decisions such as the institutional arrangement of the financial sector. (i), as Ethiopia has serious shortages of foreign currency, it may use special policy incentive to attract FDI to develop Industrial Park. In this regard, it is important to revisit the financial sector regulation if it can accommodate those FDIs who can use their own sources of capital through their own financial institutions. Thus, it is important to use IP to experiment new financial institutional innovations that enhance or facilitate industrialization through Industrial Park development. (ii), there are also some issues that require the reconsideration of existing laws or regulations such as the labor law, accession to WTO and logistic services. For example, the labor law is important in smoothing the industrial relation between the employees and employers (Park enterprises) and should be revisited in a way that
ensures healthy industrial relations. In this case, the modalities of addressing issues that may result, for instance, in labor strike that substantially negatively affect the smooth operation of the manufacturing sector needs to be given due consideration. Similarly, it is also essential to revisit the same law in terms of the use of foreign professionals. (iii), if Ethiopia is to establish the Logistic Park, it is also important to revisit the investment proclamation (Regulation no. 269/2012), which restricts FDI from participating in the logistics service.

Second, the development of SEZs was implemented through a learning process. China developed different generation of SEZs at different time. So far, SEZs passed through four generations. The layout of the different generations was determined based on the experience and lessons learned from the previous generations. Each generation has specific objectives, determined based on China’s ‘incremental’ strategy. The same trend can also be adopted in Ethiopia since industrial Park development is a new phenomenon in Ethiopia. Thus, it is also advisable to use the first generation of Industrial Parks as a learning stage, and then develop or expand based on the lesson obtained from the first generation. The lesson from SEZs in China shows that it usually takes about a decade to start new generation of SEZs.

6.5. **Branding ‘Green Industrial Park’ development in Ethiopia**

Ethiopia adopts a green economy strategy, aiming to attain a carbon neutral economy in its Climate Resilient Green Strategy (CRGE), and is leading African countries in adopting this strategy. As a “Low-Carbon Economy”, its development process involves industries with low energy consumption, less pollution, and less emission. Consistent with this green strategy, it is advisable to give a brand name for Industrial Park development as ‘Green’. In promoting this Green Industrial Park, it will achieve its vision of low carbon economy by reducing GHG emissions from industrial processes while at the same time increasing the competitiveness of Ethiopia’s industries, creating jobs, and protecting the country’s environment.

Towards realizing this brand, the country needs to regulate park enterprises to ensure that they are in compliance with the environmental law; or give priority to attracting low – emission enterprises/industries to its park to avoid industrial pollution or design incentive based policy instruments that regulate environmental pollution based on performance. For instance, it can give priority to Eco – Industrial Parks, which bring together businesses that cooperate with each other and with the local community to reduce waste and pollution, to share resources efficiently and to
help achieve sustainable development to increase economic gains and improve environmental quality. The country can also encourage the use of green technology input such as energy, low or carbon neutral materials, etc. The Ministry of Environment and Forest can take this responsibility in periodically regulating park enterprises as per its standards.

6.6. **Targeted policy incentive**

While a country’s comparative advantage is the key sources of attracting foreign direct investment, the delivery of efficient services and policy incentives can also play crucial roles in promoting foreign and domestic investment. In this regard, the lesson from SEZs in China and other countries in South East Asia shows that policy incentives are made based on rules of international competition and to achieve clear and measurable targets and with effective monitoring mechanisms. These incentives are related with income tax, custom tariff and VAT and credit subsidies for initial park infrastructure development. For instance, in China’s SEZs, manufacturing companies having operated for more than 10 years enjoy a preferential corporate income tax rate of 15%, with two years exemption then three years half deduction of corporate income tax from the year of getting profit. Custom incentives were related to exemption of tariff and VAT for export and/or import for capital goods of foreign companies and household goods of foreign personnel. One of the key lessons from China’s SEZs was that the central government did not invest in infrastructure construction, but granted a policy of leaving all the fiscal income to the local/SEZ governments for 10 years, and sharing the increment of fiscal income with the local/SEZ governments after 10 years. It also granted subsidies to credit for infrastructure construction. This is with clear objective that the central government aims to overcome shortages in foreign currency and resources for initial infrastructure investment in SEZs.

Following the goal of IPD and nature of IPs suggested above, policy preference can be objectives – based, sector – based or Park actors – based. Objective – based policy preference can be related to the objective of ensuring technology transfer, employment, capital attraction, export promotion, domestic linkage and/or sustainable resource utilization. If policy preference is sector – based, then it can be designed based on the type of industrial product of Park enterprises, which can be textile, agro processing, science and technology, etc. as stated previously. Policy preference can also vary depending on the type of Park actor: Park developer, operator or enterprise. Incentives related to land and/or infrastructure development may be more effective if related to
Park developer or operator while other incentives such as income tax, profit tax, foreign currency, financial loan, etc may be effective if they are made for enterprises, considering their objective or sectoral focus. However, policy incentives require effective implementation and monitoring mechanisms for their effectiveness, regardless of type of incentives. These mechanisms can be controlling and/or performance based. For instance, evidences shows that performance based incentives are found to be more effective in other countries.

6.7. **Clear and unambiguous legal framework at federal, regional and park levels**
The other key lesson from SEZs of China and other countries such as South Korea is the need to formulate clear and unambiguous legal framework. The legal framework for IPD should be clear to ensure its normal operation and because it is the basic condition for Park establishment. Besides, it provides the management’s main body, the enterprises and the stakeholders with common codes of conduct, and provides mandatory, authoritative written offers for all sides once disputes occur. In relation to this, two lessons can be drawn from SEZs regulation in China. First, SEZ’s regulation followed the international codes for economic operation that prevailed during the time, regardless of the socioeconomic system of China. Second, since China was using SEZs as experiment for opening up, it did not have a unified legislation at country level. Thus, it had to authorize the local state the power to legislate for the park. Given that effective implementation of IP requires regulations at Federal, regional and park levels, the following lessons can be drawn for Ethiopia.

**Federal IP regulation:** The lesson from China cannot be directly copied to Ethiopia since the two countries have different governance systems. China is a centralized country whereas Ethiopia is a federal country. Being a centralized country, the central government of China has the right and power to implement any regulation in any part of the country. However, this is not the case in Ethiopia. Each region has constitutional right and power to develop its own Park regulation to be functional within its jurisdiction. On the other hand, the federal government has the constitutional right to regulate, formulate and implement national policies and plans; development activities implemented using federal budget in a particular region as well as those crossing two or more regional states. In relation to Park regulation and administrative system, article 56 (No. 3, 4, 8, 12, 13 and 18) of the constitution are worth exploring.
Therefore, the current federal IP Proclamation ratified on 9th April 2015 can be applicable for Industrial Parks developed in any part of the country for the following reasons. First, Federal IPs are funded by federal budget. Second, the institutional arrangement of Parks is developed based on international cooperation, which may require internationally valid investment agreement, immigration law for expatriates, and the like. Third, Industrial Parks may be located in more than one regional state like Dire Dawa SEZ.

**Regional level regulations**: Given their constitutional rights and power, each regional state can formulate and implement Park regulation to be functional for IPs within their own boundaries though the regulation is expected to comply with the federal regulation. However, since IP development is a new phenomenon in Ethiopia and requires some learning stage, it is strongly advisable for the federal regulation to serve as a national regulation and can be used to regulate all types of parks regardless of their location.

**Park regulation**: each park should have its own regulation, which is sometimes called normative documents. Its main purpose is to help the smooth operation of the park. It governs the operation of the park and is formulated with the notion that the park administrative system can provide effective and efficient services for all subjects based on the park including enterprises, employees, etc. It needs to be acknowledged that the park administrative body is a neutral body and functions based on a tripartite model, in which the administrative body is treated as neutral from making biased decision towards any of its subjects based in the park. At the heart of this type of regulation, key issues include the financial feasibility and sustainability of the park, efficient service provision and market – oriented business model. One of the key features of park’s regulation is that it may be different from regulations or directives used by the nation outside of the park. At the initial stage of SEZs in China, this regulation is simply a normative document used to facilitate the operation of the park.

### 6.8. **Key management functions of Industrial Park at initial stages, regardless of ownership**

Parks perform different functions, which vary depending on the type of park and its stage of development. However, regardless of the type of park, every park has the following key functions at their initial stage. The lesson from China shows that at early period of the initial stage (3 – 5 years), the key functions of the park are the development of land, infrastructure and the overall
park’s management system including formulating policies and park’s regulations, investment promotion and the services provided to its enterprises as per the market economy principle. Then, industry and capital management functions will be the key functions for the following 15 to 20 years.

However, since after some years (20 – 25 years), parks may be upgraded qualitatively (there may be change or improvement in the same industry) or undergo complete transformation (change in industrial structure), they require higher level of management functions such as urban and social management. Thus the management of these functions should also consider these higher levels of management function so that parks can be transformed or upgraded without huge cost. Thus, the key specific functions of parks at their initial stages will be:

- **Planning function**: once the type of park is known, it is straightforward to determine the land and infrastructure supply of the park. Its main task is to plan and manage the overall land development and construction of the park infrastructure and monitors its implementation.

- **Construction function**: its main function is to develop land (excavation, levelling, etc) and construct infrastructure including power, gas & water supply, sewage & water discharge, road, landscape, transportation, communication network, Internet and relevant supporting services. As this function is directly related to cost of park investment, emission and financial feasibility, it is essential to give due emphasis to efficiency in land utilization, conforming to the development and transformation trend of the industries and energy-saving buildings for reducing carbon emission;

- **Provision of one-stop Service**: this includes but is not limited to customs, commodity inspection, technical and quality supervision, banking, insurance, postal service, foreign trading, consulting.

- **Administration function**: the main function of this is to administer the overall functions of the park including the planning, construction, property (land), the price and services of different public services. It is a government body. In a private owned park, the production of the infrastructure may be provided by the park developer. In this case, it should be the administrative body which administers the investment and commands the production and supply of the infrastructure.
- **Park security**: one of the key functions of a park starting from its initial stage is to protect the safety of the park and enterprises placed within the park. The function of the park security includes formulating the park’s security rules; verify the safety of the production equipment, facilities, etc of the subjects within the park; supervise and administer the transportation, storage and usage of dangerous goods; and penalize those who violate the safety and security of the park.

- **Business development**: its main function is to promote the park to attract new enterprises and to upgrade the long-established enterprises. In this case, it is important to give due emphasis to the local advantage that the park acquires.

- **Innovation & entrepreneurship function**: Enhancing innovation & entrepreneurship, with relevant service and training programs provided. Its main function is, therefore, to link the Park with the domestic economy so that technology, improved management skill, etc can be transferred to the rest of the economy. In such Park management function, the role of the Park operator is very crucial.

6.9. **Clear and effective administrative system at regulatory, implementing and park levels**

One of the key benefits of Industrial Park is to facilitate investment and trading by providing effective and efficient services. This depends on the administrative system of the Industrial Park. Generally, the administrative system of Industrial Park depends on the governance system of the host country, type (Nature) of, ownership and stage of development of the Park. The lesson from SEZs in China also shows that SEZs have different administrative pattern at different stages of their development. At early stage of SEZs, for instance, the central government decentralized its power and granted provincial-level economic management authority to SEZs so as to simplify procedure of examination and approval; improve administrative efficiency; establish management institutions entrusted by government; directly manage developing, construction and operation; as well as provide high-quality efficient administrative services. It is, therefore, essential to learn from this lesson and develop an administrative pattern that can provide efficient and effective services at different levels including provision of permits for park investment permit, development, operation and park – enterprises.
6.10. **Park promotion**
Industrial park development faces strong competition from other parks within and outside of the country. Thus, park development in Ethiopia should be supported by proactive promotional strategy so as to attract enterprises and operate sustainably. This requires identifying and targeting both foreign and domestic tenants, which requires promoting and marketing of the industrial park and its specialised services at national and international events that suits the needs of the tenants. While this is at the core of the park manager’s activities, it will be better to be carried out by the Ethiopian Investment Commission as part of its core activities since it is the only institution in a better position for Park promotion at the initial stage of park development. Besides, Ethiopian embassies based in targeted countries can also consider Park promotion as their key strategic activity. As the main sources of information for new investors, since the role of enterprises currently operating in the existing parks is crucial in promotion, it is important that the park managers ensure that these firms are maximising the benefits of proximity to other enterprises, encouraging linkages between them and with service providers.

6.11. **Design appropriate indicators to track the park performance to ensure the success of IPD in Ethiopia:**
Industrial Park development is used to meet certain development targets such as employment, foreign currency, technology transfer, etc. Thus, investment on Park’s infrastructure, investment permit and all kinds of preferential policies is designed with the expectation that the host country will realize the pre-defined objectives. It is, therefore, strongly advised to develop key indicators that are measurable and verifiable so that it is possible to track and evaluate the performance of IPD in Ethiopia. This will also help to identify bottlenecks and make corrections along the implementation of IPD in Ethiopia. The indicators can also be used to track the development stage of a particular Park so that it is possible to make timely decision on its upgrading or transformation. Some of the key indicators can be sales revenue, Industrial output value, Import & export value, GDP of park, employment share of Parks, etc.

6.12. **Establish an institution to build domestic capacity in IPD**
Industrial Park development is a new phenomenon in Ethiopia, and requires huge investment whose benefit is expected to be realized in the long term, 20 to 25 years. Its development differs
not only from country to country but also within a country from time to time depending on the country’s and international situations. It is absolutely essential to lead, regulate, implement, monitor and evaluate its development using well systematically collected, analysed and reported information. While it is good and wise to learn from others through training, working together with those who have experience, it is more important to build in-country capacity through acquiring knowledge, develop skill and experience. Thus, it is strongly advisable to establish a separate institution that provides evidence based information, build country capacity through training and conduct the required study and research so that decision makers and investors get information to make policy and investment decisions. Some of the key function of the institute will be to collect information on industrial structure of Parks, conduct study and research, develop indicators to follow up Park development, conduct feasibility study and technical evaluation or the development impact of IPD in Ethiopia periodically. In the short term, this institution can establish collaboration with similar institutions in other countries that have rich experience in IPD. The Ministry of Industry can take the responsibility to establish this institute.

6.13. Ethiopia should be very careful not to create distortions in Park development.
While Industrial Park development has huge benefits especially for countries at their early stage of development aiming to transform their economy, it may also result in daunting outcomes unless it is well designed and implemented. Based on the lessons from SEZs in China and other countries, we outlined the potential sources of distortions along the implementation process of IPD in Ethiopia as follows:

- While it is essential to benefit from FDI, it is also strongly advisable for Ethiopia not to overestimate the positive effects of Industrial Parks: The lesson to Ethiopia is that it should be selective in terms of objective and sector to use IPD to attract FDI.
  - FDI can also create the opportunities for ‘transfer pricing’, which is a case more in transnational corporations with operation in more than one country. Overcharging or undercharging each other so that profits are highest in those subsidiaries operating in countries with the lowest corporate tax rates. It should be noted that this is now a common practice of TNCs because of the proliferation of tax havens that have no or minimal corporate income taxes. Companies can vastly reduce their
tax obligations by shifting most of their profits to a paper company registered in a
tax haven;

○ It should also be clear that it is ‘greenfield’ investment that has the highest benefit
in terms of technology transfer, skill and management knowhow. There is no
guarantee that these benefits will be obtained from Brownfield investment though
they can also improve productive capabilities by bringing high quality engineers
and managers.

- Ethiopia should also be very careful not to create distortions in Park development:
we can also learn that care should be taken to avoid distortions in park development as a
result of the following actions:

○ Fall in trap due to thirst for development, which result from the low/zero price of
land, absence of restrictions to land use certification; allowing foreign investors to
use the free land for collateral; randomly formulating preferential policies for tax
deduction and exemption

○ Low price auction regardless of the consequences from too much competition
among parks;

○ Getting trapped by blind faith in foreign investments;

○ Sacrificing the environment leaving endless trouble to the future; and

○ Facing bankruptcy to heavy debt to develop parks

- Distortions may also originate from issues related to Foreign exchange for Foreign Park
developer, operator and enterprises: Park developer, IP operator and enterprises are entitled
to borrowing funds from domestic and international financial institutions. They are also
entitled to remittance. To avoid negative effects of IPD related to these elements of the
proclamation, it is good to give due emphasis to the following issues:

○ Domestic bank should be cautious in providing credit to foreign enterprises/park
developers since it can change the money into foreign currency and send it out

○ FDI may also have negative impact on foreign exchange position of the country
since they may contract foreign loan, importing input. Thus it is advisable to design
appropriate regulation on foreign exchange earnings and spending by foreign
companies making investment based on how much they should export, and how
much input they have to buy

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Land related issues: Park developer, IP operator and enterprises are entitled to mortgaging their developed land; and Park developer can transfer developed land through sublease (with permission of the board). Since this is the key source of rent seeking behaviour, it is essential to develop directives that avoid or minimize such behaviours especially in privately developed Parks. The source of rent seeking is in the transfer of developed land, which varies depending on the owner of the Park. While the risk is low in public Parks (transfer of developed land at low price), it is commonly observed in Private Parks. In Private Parks, secondary market behaviour is observed since the proclamation allows the Private developer to transfer the developed land using sublease system with higher or true value of land. In this case, the supervisory body, EIC, should supervise and even approve the price of the transfer of the developed land. In addition, the developer can also use the developed land to sell shares for joint venture. It is, therefore, generally important to supervise Park developer, specially Private Park developer or operator on the land transferring process including the right use value of developed land, attracting productive enterprises and its implications for land price difference within and outside of the Park.
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