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SCHOOL OF GRADUATE STUDIES,

**THE ECONOMIC CONTRIBUTION OF INDUSTRIAL
PARKS IN ETHIOPIA**

BY
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JULY, 2020

ADDIS ABABA, ETHIOPIA

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ETHIOPIA**

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**A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF
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APPROVED BY BOARD OF EXAMINERS

As member of the board of examiners of the MA thesis open Defense Examination, we certify that we have read, evaluated the thesis prepared by Abebe Jote and examined the candidate, we recommend that thesis be accepted as fulfilling the thesis requirement for Degree of Master in Development Economics.

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DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance by Abebe Jote entitled “THE ECONOMIC CONTRIBUTION OF INDUSTRIAL PARKS IN ETHIOPIA” is my own work. I have undertaken the research work independently with the guidance of and support of the research advisor. All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

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June 2020

ENDORSEMENT

This thesis has been submitted to St. Mary's University, school of Graduate Studies, for examination with my approval as a university advisor.

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June, 2020

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ACRONYMS

CIIP.....	Competitive Industries and Innovation Program
EIC -----	Ethiopian Investment Commission
EDRI-----	Ethiopian Development Research Institute
FDI -----	Foreign Direct Investment
FDRE	Federal Democratic Republic of Ethiopia
GTP -----	Growth and Transformation Plan
IP -----	Industrial Park
IPDC -----	Industrial Park Development Corporation
MoI-----	Ministry of Industry
NBE-----	National Bank of Ethiopia
SEZ-----	Special Economic Zone
UNIDO-----	United Nation Industrial Development Organization

ABSTRACT

The Ethiopian government has been intensively engaged in the construction of industrial parks that are targeted to accelerate overall economic growth by providing productive employment opportunity for the population, technology, knowledge and skill transfer and export of manufactured goods which generate foreign currencies. Thus, the main objective of this study is to assess the economic contribution of industrial parks on Ethiopian economy in order to make a one-step contribution to the existing literature, especially in Ethiopia where there is no empirical study on the topic. The study used quantitative research approach. To this end, secondary data was collected from Ethiopian Investment Commission, Industrial Parks Development Corporation, World Bank, Ministry of Industry and National Bank of Ethiopia for the period 2015 to 2019. The researcher also used relevant websites and annual bulletins for the study. The trend analysis of employment opportunity and export revenue showed that, increasing every year. The main reason of this result is the addition of newly operated industrial parks every year. While FDI increased at increasing rate in first three years and the performance was decreased by year of 2018 and 2019. The empirical results showed that export revenue has a positive significant relationship with RGDP at 5% and FDI has a negative significant relationship with RGDP at 5% confidence interval while employment opportunity have no significant relationship with RGDP. From the findings the study recommended that more job should be done on increasing creation of employment opportunity and promoting export through product differentiation and improving quality of the product.

Keywords: *Industrial Parks, Economic growth, Quantitative data and multiple regressions*

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

According to the United Nation's definition, "Industrial Parks are the small and middle size organizations that have integrated business and production, with taking advantage of the common infrastructure services that have allocated in common place fabric buildings".

The birth and development of industrial Parks in developing countries is an inevitable demand of Socio-economic development method, particularly from the industrialization and modernization method yet as from the international economic integration trend. (Vu Thi Kim Anh, Hoang Thi Viet, Dao Thu Ha, Nguyen Thi Diem Chi, 2019).

Industrial parks area unit a vital development tool adopted by several industrialized countries (Hakansson and Johanson, 1993). The growth sustained by the technology utilized in the economic park opens opportunities for making new jobs, up native productivity and maintaining competitive surroundings within the individual country (Markusenetal, 1986). In addition, producers operative within the parcel of land can get larger advantages at lower prices. the possibility to get extra advantages by supporting native development and therefore the chance to form new jobs together with the financial gain growth can absolutely influence the native economic development (Castells and Hall, 1994).These changes, in conjunction with the concentration of investment in analysis and development can modify the economic structure of the native region and can contribute to upgrading the standard of life.

Since the Nineteen Sixties, overall increasing number of countries has embarked on the road to promote industrial enterprise and economic restructuring through industrial parks. For developing countries, industrial parks will maximize resource integration for limited production factors within certain special scope. By attracting labor and capital-intensive domestic and foreign investment in manufacturing and service industries, industrial parks cannot solely increase job opportunities, wages and skills of local employees. (UNIDO, 2018).

In context of an overall development, industrial parks contribute a big role for increasing the native competitiveness through what it provides, institutional framework, fashionable services in administration and act as a policy tool for governments to more efficiently influence firm derives of competitiveness. Industrial parks will have a positive influence on the revitalization of business setting, transfer of recent technologies, increase the potency of urban land use, cut back rural-urban migration, making backward and forward linkage for industries found in industrial parks, concentration of corporations will give result effects each within and outdoors the park, specialization and division of labor among enterprise, any industrial parks represent a chance for associate degree flow of foreign direct investment and decrease of unemployment by means that of creation of new jobs and alternative advantages of industrial development of the economy. (Noufal, Ramachandran, 2016).

Industrial Parks proclamation of Ethiopia (Industrial parks proclamation 886/2015) puts the subsequent objectives of industrial parks establishment: 1) regulating the designation, development, and operation of business park; 2) contributing towards the development of the country's technological and industrial infrastructure; 3) encouraging private sector participation in manufacturing industries and related investments; 4) enhancing the competitiveness of the country's economic development; and 5) creating ample job opportunities, and achieving sustainable economic development.

Ethiopia established Industrial Parks Development Corporation (IPDC) as a national public enterprise with a twin role of developer and regulator (Regulation No 326/2014). The proclamation obliges the national to determine industrial development zones in regions and industrial zone development shall be undertaken by the national or, wherever necessary, by joint investment of the government and private sector (Proclamation No. 886/2015; Article 2(1); 2(11); 33; 35; 37). Ethiopia has achieved a remarkable economic growth rate of 11 per cent each year within the last twelve years, underpinning of that's that the growth within the agriculture and repair sectors. The contribution of trade to value, on the alternative hand, has remained below fourteen percent that's a smaller amount than half the geographical region low financial country average. Even so outstanding process, the limited role contends by the industrial sector within the economy imply piece of land use and growth as key instruments for attracting investment, promoting technology transfer, export promotion and generating employment; thereby achieving economic transformation.

The positive attributes of industrial park development have led Ethiopia to consider this model as a tool to facilitate industrialization. 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 plans (GTP II). Thus, massive expansion of domestic and foreign direct investment in manufacturing is expected to drive the development of manufacturing industry (EDRI, 2017).

The Ethiopian government first began experimenting with industrial park development through a purely private model. In 2008, Ethiopian authorities signed a memorandum of understanding with a Chinese developer to finance, build, and operate an industrial park in Dukem, a village located thirty-seven kilometers south of capital of Ethiopia. While the government would offer tax incentives to tenant firms, including an income tax holiday and exemptions from import duties, the private developer would be responsible for developing the land and infrastructure, recruiting investors to create light manufacturing activities, and providing management services to tenant firms once the zone became operational. The project, which would occupy five square kilometers and require \$390 million in infrastructure expenditures, was intended to be operational within five years and host 80 different industrial manufacturing operations (CIIP, 2017).

1.2. Statement of Problem

Industrial parks are normally established to act as catalysts for trade, investment, and wider economic growth. Most often, they aim to boost competitiveness to facilitate the economic transformation of their host countries quicker or most effectively than would be possible without them. In different countries and at different times, however, the particular objectives vary, from attracting FDI to creating employment to experimenting with reforms.

Ethiopia's industrial policy places strong emphasis on the role of the state in promoting and facilitating the country's industrial development, which intends to enhance the living standards of the Ethiopian people by 2025.

Despite outstanding economic growth over the last decade, Ethiopia has achieved little in terms of economic structural transformation. The main constraints that hinder economic transformation are lack of capital, foreign exchange, knowledge, infrastructure and institutional constraints in delivering economical services. An economic growth model that focuses on high productivity sectors, particularly the manufacturing and modern agriculture and services is imperative to keep up the expansion performance of the economy and speed structural transformation (Alebel, Mulu, Girum & Berihu, 2017).

The Industrial Parks Development Corporation (IPDC) was established in 2014 by the Council of Ministers (Regulation 326/2014), with a mandate to develop, operate and administer wide ranges of industrial parks within the country through lease, transfer and sale of land and constructions. The IPDC is designated to prepare a detailed national industrial parks master plan based on the national master plan of the Regional States or the two City Administrations (Addis Ababa and Dire Dawa). The Corporation is also authorized to function industrial land bank in accordance with the agreement all over with Regional States and also the City Administrations (IPDC, 2014). To the knowledge of me, only a few studies have been conducted so far regarding IPs in Ethiopia. From these; Contribution, Challenges and Prospects of Industry Parks in Ethiopia by Desalegn Shibiru, Housing Condition of Industrial Parks Workers in case of Hawassa Industrial Parks by Selamawet Teku and Industrial Parks Development in Ethiopia (case study) by UNIDO are the study conducted regarding Industrial Parks in Ethiopia. The first study mainly focused on challenges and contribution of some industrial parks, while the second research focused only on workers condition and handling by Hawassa industrial parks, and the UNIDO study conducted to assess the history of industrial parks in Ethiopia.

This study motivated by the apparent expansionary approach of the government on industrial parks, primarily aims to determine the contribution of this on economic growth using FDI, Employment Opportunity and Export Revenue as proxy variables. Thus, the study will helpful in filling the literature gap on this considerably mediatized and necessary industrial park contribution by giving a special focus to the corporate operational industrial parks.

1.3. Objectives of Study

1.3.1. General Objective

This study is especially aimed toward assessing the economic contribution of industrial parks on Ethiopian economy.

1.3.2. Specific Objectives

As part of the general objective, the study has the following specific objectives:

1. To assess the economic contribution of the industrial parks in terms of export revenue gained for the country
2. To assess the employment creation of the parks in line with the state plan
3. To assess the capability of parks in terms of attracting foreign direct investment

1.4. Research Questions

This research endeavor attempts to answer the following key questions:

1. What are the industrial park's contributions in terms of generating export revenue for the country economy?
2. How the industrial parks performance can be measured in terms of generating employment opportunity in line with government plan?
3. How is the capability of parks in case of attracting foreign investment?

1.5. Research Hypothesis

H1= Industrial parks (corporate) has contribution to economic growth in Ethiopia

1.6. Significance of the Study

As stated earlier, this study investigates show Industrial parks contribution on economic development of Ethiopia. The contribution of such study is deemed very important. As various projections indicate, Ethiopia is one of the fastest developing economies in Africa and beyond. It has made its national ambition to achieve the Millennium Development Goals (MDG) and eventually make poverty a thing of the past. One promising national direction set out in this regard is establishing industrial parks in different parts of the country. Any research endeavor around it, therefore, is of high importance. I believe that this pioneer study will unearth important issues and contribution related to economic impact or existing as well as upcoming industrial parks in the country. Moreover, it is my sincere hope that this early study will serve as a stepping stone for future researchers, policy makers, for government budget plan, for domestic and foreign investors to build on it and address more issues beyond ours cope.

1.7. Scope and Limitations of the Study

The thematic scope of the study focuses only on the economic contribution of state-owned industrial parks that are on operation. The scope of the study was also limited by the variables which are selected by researcher to assess the finding. The study is constrained by the following limitations: Since the parks are on infant stage, lack of adequately compiled readable material on the economic contribution of the industrial parks. The absence of directly-related research material on the topic was yet another challenge

1.8. Organization of the Study

The thesis is organized into five chapters as follows.

The first chapter is a general introduction to the study which discusses the problem of the study, objectives of the study, pertinent research questions that are to be answered by the research, the scope and limitations of the study. The second chapter is literature review. It addresses relevant and related issues and concepts around the study from international experiences. It reviews about Ethiopian Industrial Park development history and contributions for development. The third chapter is discussing the research methodology applied. This chapter describes the methodology, research design, criteria the case study was chosen and why the specific methodology was employed.

The fourth chapter is about the result and discussion of the study. The collected data of the study will be presented clearly and analyzed according with the research questions of the study with the set of parameters. The last chapter is on conclusion and recommendations. This part starts with discussion of the study and the major findings of the research and concludes with work around and recommendations for the economic contribution of industrial parks.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The literature review part contains conceptual frame of the study concerning the theoretical frameworks by which the overall research tasks guided. It also covers some empirical literature review which helps in getting practical experience that could be taken as lesson and use full in making future recommendations.

2.2. Theoretical Framework of the Study

This section covers important theoretical literature reviews related to the economic contribution of industrial parks which include employment opportunity, export revenue, and attraction of FDI for this country.

2.2.1. Definition of Industrial Park

The industrial park concept is not an overlong. In fact, it has been around for decades and has grown during the last twenty-five years (Bonde-Henriksen1982). A study made in America by Industrial Development and Manufacturing Record, however, indicates that they have not evolved in a steady progression. Their emergence was motivated by concepts of regional policies and they were found in crisis areas of Great Britain in 1930s (Vidová12010). By1960, there were already 46 industrial parks.

Industrial park is defined as a track of land set aside for industrial purpose under the private management and control of developers or investors. Typically, it includes many designated sites. (Bonde-Henriksen 1982) explains an industrial park as carefully planned, low-rise buildings located in a landscape setting of wide lawns, interconnected by broad boulevards. Generally, the property has all the characteristics of an ideal industrial site, including installed utilities, highly accessible highways and rail connections, and finished grading.

According to Ethiopian industrial park proclamation, the term "industrial park "is defined as

“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, one-stop shops and have special incentive schemes, with abroad view to achieving planned and systematic, development of industries, mitigation of impacts of pollution on environment and human being 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.”

2.2.2. Brief History of Industrial Parks

The cornerstone of industrial parks can be found in Great Britain, a country where factory production spread and the first industrial zones were founded. According to the journal by Jarmila Vidová, these were setup by multiple production units. The first factories arose somewhat accidentally. Their later occurrence, however, represents an organized deed that followed certain ideas of urban planning and regional concepts. The first industrial park, Trafford Park, was established by a company named Ship Canal and Docks near Manchester in 1896. (Vidová, 2010).

The development of industrial parks underwent several steps of evolution. This progression is often described in terms of generations of industrial parks. The first generation of industrial parks which were built in 1970s, for instance, had different look compared to other generations. It was characterized by assembly halls and storages rather than simplistic architecture. The area of administrative buildings took just about 10-15% of the total area of the parks. In the period between 1975 to 1985, industrial parks were offices used by companies dealing with science, technologies and businesses, and they occupied a much larger space. On the contrary, the second-generation industrial park was characterized by a more challenging and complicated architecture. Furthermore, the third-generation industrial parks were built since the second half of 1980s. (Vidová, 2010).

The characteristic features of this generation include: elastic use of an area and a wide portfolio of services, an increase in the number of administrative staff as well as the leasing out of more space for IT-related offices. Coming closer to our time, the fourth generation of industrial parks which began to arise from the mid-1990s is characterized by administrative buildings and a wide portfolio of services. Companies located in the parks used high-end technologies, storage houses were

usually located outside the park itself and there as an increase in the importance of recreational areas connected to the park that were used by people working in them.

Since the second half of the 1990s, industrial parks have been an integral part of an international network of cooperating parks (Vidová, 2010).

Industrial park attempts to accelerate the process of reforming the economy; the central institutions focus on supporting the use of technology to modernize the industry that would lead to the diversification of activities and achievement of sustainable industrial development (Meşter Liana Eugénia D.). On the other hand, they usually face challenges in the market system, as the imperfection of the market of some institutional system from national and regional administration hampers companies' access to information, knowledge, new technology and financial resulting in increased business risk and directly affecting the progress towards achieving development goals. For the irrespective countries, industrial parks may be considered as a solution to overcome these problems in an attempt to accelerate the economic development by attracting innovative businesses that can generate jobs, higher incomes, therefore more resources to institutions. As an advantage pertinent to the national economy, industrial parks have concentration of various activities and services which can influence investors' decision to switch to regions. Successful industrial parks can, therefore, become centers of growth and innovation, supporting local development and boosting the national economy.

In addition to these, industrial park can avoid joblessness by creating new job opportunities, improve local productivity and maintaining competitive environment in the country, brings concentration of investments which grows productivity and competitiveness in both national and international markets. Moreover, through the industrial park development new technologies and innovations are transferred. Industrial parks can provide a favorable environment for the development of concentrated firms but also for the local development.

2.2.3 Some International Experience of Industrial Parks (Zones)

Some of the more successful industrial park programs have developed institutionalized mechanisms for addressing investment climate constraints. Indeed, policy advocacy is an emerging and important component of industrial park management⁶⁹, grounded in continuous listening to the industrial park investors' experiences regarding how prevailing laws and regulations, performance requirements, incentives and administrative practices affect their operations, and what changes would support them in expanding (and thus their economic impact). Examples of some successful industrial park policies may be found below,

INDIA

India became the first country in Asia to set up an Export Processing Zone with the establishment of EPZ in Kandla, Gujarat in 1965. Following China's success in implementing SEZs from 1978 onward, India's 2000 Trade Policy laid out a regulatory framework for the development of SEZs, eventually formalized under the SEZ Act in 2005, replacing the EPZ scheme, and providing a number of additional benefits. The goal was to promote exports, attract investment, create employment and give momentum to the manufacturing sector. The SEZ Act provides, amongst other benefits, income tax holidays and exemptions from indirect taxes. Indian State Governments play a key role in establishing SEZ units, and in creating on-site and off-site SEZ infrastructure. Any proposal for setting up a new SEZ has to be submitted to the State Government, which forwards it for consideration, with recommendations, by the Department of Commerce of Ministry. SEZ in India can be set up by any private, public, joint, domestic or foreign-owned company. In 2015, the government of India launched the Foreign Trade Policy 2015–2020, aiming to increase merchandise exports from US\$450 billion to US\$750 billion, including through building new mega-coastal economic zones and the reform of existing SEZs. The Policy also stressed the importance of an Electronics Hardware Technology Park Scheme, a Software Technology Park Scheme and a Bio-Technology Park Scheme. The National Manufacturing Policy also recognized the importance of industrial parks in the form of National Investment and Manufacturing Zones. The objective of the National Manufacturing Policy is to increase manufacturing's share of GDP from 16% to 25% and to create 100 million jobs by 2022. Under the policy, the Central Government creates an enabling framework and provides incentives for PPP-based infrastructure development for large integrated industrial townships. (UNIDO, 2019).

REPUBLIC OF KOREA

The Republic of Korea, in 1962, introduced the Industrial Location Policy under the Industrial Placement and Factory Construction Act, in order to provide industrial sites with good infrastructure at reasonable cost. The policy facilitated the establishing of large industrial zones and the clustering of regional industries, with the establishment of the country's first industrial park (Ulsan Industrial Centre) the same year. In the early 1970s, the development of large-scale industrial parks became an industrial policy priority, with a focus on six core strategic industries of steel, machinery, shipbuilding, electronics, non-ferrous metals and petrochemicals. In the 1980s and the 1990s, the government also began promoting small and medium-sized industrial parks in underdeveloped provinces, establishing small-scale Agro-industrial parks throughout the country to attract SMEs and to improve incomes in rural communities. In the 1990s, the focus shifted to information-oriented and knowledge-based industries such as biotech, with innovation-oriented or high-tech industrial parks constructed in large provincial cities under the Industrial Sites and Development Act. Post 2000 efforts were geared towards improving the competitiveness of the first-generation industrial parks and to make them environmentally-friendly. Exclusive foreign industrial complexes and foreign investment zones have also been introduced to attract FDI. Specialized parks, such as Cultural Industrial Parks and Telecommunication Industrial Parks, have also emerged. The Republic of Korea currently has 41 national industrial complexes, 510 local industrial parks, 11 urban high-tech industrial parks and 444 rural industrial parks. (UNIDO, 2019).

DUBAI

Dubai is the trade and service hub for the Arabian Gulf and the broader Middle-Eastern region. The United Arab Emirates' Jebel Ali Free Zone (www.jafza.ae), the largest free zone in the region, was established in 1984 in order to support foreign trade and investment at Dubai's Jebel Ali Port and has contributed greatly to the UAE's economic development, acting as a model for zones in the other emirates, for instance Sharjah's Hamriyah Free Zone (www.hamriyahfz.com). Apart from the infrastructure and tax incentives it offers, Jebel Ali is supported by its own investment laws, is the first free zone in the world to have been ISO 9002 certified, and is backed by Dubai's International Arbitration Centre's world class dispute resolution system. FDI in the Jebel Ali, comprising 6,000 companies from 100 countries, represents 32 percent of total FDI flows into Dubai, contributes 21 per cent to Dubai's GDP and employs more than 144,000 people. In 2015, the zone handled \$ 87.6

billion in trade. (UNIDO, 2019).

IRAQ

UNIDO's support for industrial park development in Iraq between 2010 and 2014 led to a number of mutually reinforcing outcomes, including an improved institutional, policy and regulatory environment for industrial zones, as well as increased capacity in industrial zone management. The project notably helped the Government design a comprehensive and conducive legal and institutional framework for industrial parks, including through an "Industrial Cities Law" approved by the Shora Council, the Office of the Prime Minister, the Council of Ministers and the Council of Representatives (Parliament). The composition of the Steering Committee took into account the multiple stakeholders in industrial parks, including the Ministry of Planning, the Ministry of Industry and Minerals, the National Investment Commission, the Free Zone Commission within the Ministry of Finance, and the Governorates and Municipalities. The ongoing coordination between these multiple Ministries led to this project-based Steering Committee structure gradually transitioning into a formal, standing High-Level Industrial Parks Committee chaired by the Ministry of Industry and Minerals. The Committee governs industrial park development, including through its oversight of a semi-autonomous Industrial Zones Authority, established under its aegis. (UNIDO, 2019).

TURKEY

The Turkish investment incentives system comprises four different schemes, equally available to both local and foreign investors, both inside and outside industrial parks: The General Investment Incentives Scheme; The Regional Investment Incentives Scheme; The Large-Scale Investment Incentives Scheme; and The Strategic Investment Incentives Scheme. Under these various schemes, VAT zero-rating and refund mechanisms, customs duty suspensions, income tax reductions and withholding allowances, social security premium support, interest rate support, and land can all be provided in support of new investment. These incentives differ according to the type, size and location of the investment. Moreover, additional incentives are provided to enterprises located in industrial parks, including: Exemption from real estate taxes for five years from the date of completion of plant construction; reduced water, natural gas and telecommunication tariffs; Exemption from title registration taxes when merging or separating industrial park plots; Exemption from municipal taxes relating to the construction and operation of plants; and Exemption from the municipal tax on solid waste if the industrial park does not avail itself of municipal solid waste

management services. (UNIDO, 2019).

CHINA

Direct subsidies are offered by certain industrial parks in China to both domestic and foreign investors whose projects meet certain criteria (e.g., attracting high-caliber talent, promoting industrial upgrading and scientific and technological innovation). Available incentives include: Incentives for industrial transformation and upgrading – To encourage inefficient enterprises and enterprises with poor environmental performance to upgrade; a certain proportion of investment in the associated fixed assets can later be refunded; Tax credits for expanding modern service firms – the Wuhan Economic Development Zone, for example, provides supports to enterprises in modern services to ramp up production, offering financial rewards of up to RMB 100,000, RMB 200,000 or RMB 300,000 respectively for those qualifying enterprises whose annual operating income is over RMB 100 million, growing at an annual rate of over 10%, 20% or 30%, and having made a positive tax revenue contribution; and Support for strategic local development projects – Strategic projects that may serve as growth drivers and contribute in an exceptional manner to local economic development may be granted support upon approval by the district government and the management committee governing the hosting industrial park. (UNIDO, 2019).

VIET NAM

The enactment of Viet Nam’s Law on Investment in 2005 contributed considerably to the rapid development of the nation’s industrial and economic processing zones. Under the Law, investors in these zones enjoy preferential taxes, including as regards the country’s enterprise tax, import tax and land use tax. According to the Ministry of Planning and Investment (MPI), Viet Nam now has 326 industrial and economic zones, offering 94,900 ha of serviced industrial land. On May 22, 2018, the Vietnamese government issued Decree No.82/2018/ND-CP (“Decree 82”) to regulate the management of industrial and economic zones. The Decree provides a framework for the planning, establishment and operation of the zones, as well as for investment therein. Under the Decree, the MPI assumes primary responsibility for, and collaborates with relevant central and municipal government institutions, in securing the Prime Minister’s approval for the planning and development of industrial parks. (UNIDO, 2019)

2.2.4 Ethiopian Industrial Parks Development Objectives

The overarching objective of the domestic economic reform was the adaptation of Ethiopia's centrally planned economy to the principles of market economy in order to increase efficiency and promote economic growth. In accordance with the opening up of the external sector of the economy foreign trade was liberalized and direct foreign investments permitted progressively in different industrial sectors. Ethiopia's strategy on industrial parks comprises the following objectives:

- Attraction of foreign capital and modern technology: Foreign capital should ease the financing bottle necks e.g. for infrastructure of the modernization process, whereas technology transfer is required to upgrade old production facilities, to improve production capacities and to promote the transition from labor intensive to technology intensive production.
- Increase of foreign trade and export: The share of export-oriented production in development zones should equal ca. 70% of the total production in order to settle the trade deficit caused by capital imports. Production for import substitution in the zones is only allowed for modern high-quality products.
- Linkage Effects (cumulative effects of industrialization): There are two types of linkage effects: 1) backward linkage, whereby investments are made in anterior provinces to procure input for park production, i.e. natural resources or products of domestic suppliers flow to the park and 2) forward linkage whereby the output of park production flows to commercial customers outside for further processing. The success of linkage effects is decisive for whether a zone functions as an isolated enclave or a promoter of regional economic development.
- Learning effects (production related educational effects): Learning by doing increases the production and management knowhow of the employees, which supports the upgrading of processes, the improvement of product quality and the establishment of more efficient organizational structures. An increase of domestic employees as middle managers is especially relevant as they can afterward perform educational functions themselves.
- Economic experiment and demonstration effects: For the Ethiopian government industrial parks function as laboratories for testing principles of a market economy. The beneficial aspects for Ethiopia's modernization process will be adopted and gradually spread throughout the country.

2.2.5 Classification, Features, and Benefits of Special Economic Zone

A. Classification of Special Economic Zone

According to available data obtained from literature it is well known fact that special economic zones are categorized into four sections based on their functions. (Farole, 2011 and FIAS, 2008).

These are articulated as per the following:

1. Commercial free zones, free trade zones, and free zones (FZs):

These are the oldest form of SEZ and the most ubiquitous, notably under the bonded warehouse format found in the vast majority of sea ports and in some airports. Free zones are usually in or near major international transport nodes and are usually under the administration of ports, directly or indirectly. They are also usually physically segregated from both the port's main area and the outside by fences, walls, and gates, because they lie outside the country's custom territory. Their activities are limited to trade related processes (warehousing, storage, sales, exhibitions) and light processing operations (packaging, labeling, quality control, sorting).

2. Export processing zones (EPZs): These made their appearance in the late 1950s/early 1960s as a way to accelerate industrialization and industry- related international trade in developing countries.

3. Free enterprises (FEs) or single factory/single unit free zones: This is a variation on the FZ/EPZ in which individual enterprises are provided with FZ/EPZ status and allowed to locate anywhere on the national territory or in a designated part of the territory. In some countries, FEs and FZs/EPZs coexist. The U.S. Foreign Trade Zone system provides certain enterprises with a free trade zone (FTZ) status called subzone. This status applies to existing enterprises that wish to have the benefits of the FTZ system but whose relocation costs would be too high or to new enterprises that have a compelling reason not to locate in an existing FTZ.

4. Free ports: The term free port in the FIAS (2008) classification can be confusing, as it is used to describe what are generally known as special economic zones. In this classification, the Aqaba Special industrial Zone and the Chinese SIZs would be free ports. These free ports are the largest type of all, as they encompass very large portions of the territory, include urban and rural areas, and incorporate large transport facilities such as ports and airports. Free ports can include entire economic

regions, the populations that live and work in these regions, and all the economic activities that take place there. They can contain or even overlap political and administrative units.

B. Structural Features of Special Economic Zone

According to available data obtained from literature of global experience, special Industrial zones have structural features (FIAS, 2008). These are the following:

1. Zones are, primarily, formally delimited portions of the national territory and, secondarily, legal spaces provided with a set of investment, trade, and operating rules that are more liberal and administratively efficient than those prevailing in the rest of the national territory.

Zones are therefore defined by a specific regulatory regime. This regime may be contained in one or several dedicated laws or through a set of measures contained in a number of texts.

2. The administration of the regime usually requires a dedicated governance structure, centralized or decentralized. The attributes of this structure vary according to the nature of the zone regime, the prevalent administrative culture, the number of existing zones, the role of the private sector in developing and operating zones, and many other factors. The purpose of this structure is what matters: It is to ensure efficient management of the regime and ensure that investors benefit from its provisions.

3. Zones are usually provided with a physical infrastructure supporting the activities of the firms and economic agents operating within them. This infrastructure usually includes real estate, roads, electricity, water, and telecommunications. The infrastructure is usually composed of industrial or mixed-use activity parks and key transport infrastructure connecting the zone to its sources, markets, and economic hinterland. Even in countries where zones are legal spaces, industrial or mixed-use activity parks usually exist to host firms.

C. Benefits of Special Economic Zones

As we have learnt from the experience of countries who have registered very fast economic growth, the establishments of well-organized special industrial zones play a great role in attracting international investors. The major development outcomes from the successful operation of industrial zones are targeted to accelerating overall development in providing productive employment opportunity for the population, technology, knowledge and skill transfer. According to Farole (2011), there are two main types of benefits of special industrial zone which can be realized in the short and

long term respectively and these are articulated as per the following:

1. Static economic benefits are derived in the relatively short term through the use of economic zones as instruments of trade and investment policy. They are the result of capturing the gains from specialization and exchange, and include employment creation, the attraction of the generation of foreign exchange through exports, and the creation of economic value added.
2. Dynamic economic benefits are the longer term structural and developmental benefits that may derive from zones. These encompass the promotion of non-traditional economic activities, hard and soft technology transfers, encouragement of domestic entrepreneurialism, and the promotion of economic openness. At the national level, economic zones are formed with the goal of effecting positive changes in the competitiveness of the country or a region. On top of these aforementioned benefits SEZs have been a powerful instrument for economic growth and structural transformation (FIAS, 2008). For many of the initial zones in East Asia zones proved played a critical role in facilitating the Industrial development and upgrading the "tiger economies. Similarly, the later adoption of the model by china provided a platform for attracting FDI and not only supported the development of its export-oriented manufacturing sector, but served as a catalyst for sweeping economic reforms that were extended throughout the country.

According to Zeng (2015), in China by 2006, economically SEZs have contributed significantly to the national GDP, employment, exports, and attraction of foreign investment and new technologies, as well as adoption of modern management practices among others. All SEZs at national level accounted for about 22% of national GDP, about 46% of FDI, and about 60% of exports, and generated in excess of 30 million jobs.

According to MKE of Korea (2012), South Korean government established the first Korean export industrial park (Guio Industrial Park) in the early 1960s and heavy and chemical industry parks in Ulsan in 1962.

There are over 900 industrial parks in South Korea as of the end 2010, and the parks account for approximately 62% and 80% of Korea 's total manufacturing production and exports respectively. In addition, it accounted 58,761 enterprises; approximately 1.58 million workers in combinations as well as the production reached USD 343.1 billion in the same year.

In Latin America, countries like Dominica Republic, Honduras, and EI Salvador used free zones to

take advantage of preferential access to US markets, and have generated large-scale manufacturing sectors in economies that were previously reliant on agricultural commodities. Though, there are number of benefits, there are also many examples of failures have been registered. The most common obstacles summarized in the report of FIAS,(2008), that, poor site location, entailing heavy capital expenditure, uncompetitive policies(reliance on tax holidays, rigid performance requirements, poor labor policies and practices),poor zone development practices (inappropriately designed or over designed facilities, inadequate maintenance and promotion practices), subsidized rent and other services, cumbersome procedures and controls, inadequate administrative structures or too many bodies involved in zone administration, and weak condition between private developers and governments in infrastructure provisions could have an adverse effect for failure of the schemes proper operation. Moreover, SEZs are viewed as highly effective tools for job generation, particularly for women entering the workforce. Evidence suggested that female workers account for 6070 percent of the zone workforce worldwide World Bank (2009).

2.2.6. Industrial Park Development in Ethiopia

The lion's share of Ethiopia's economy goes to agriculture which accounted, in 2014–2015, for about 38.8 percent of the Gross Domestic Product (GDP), 90 percent of the foreign currency earnings and 85 percent of employment. In the same fiscal year, the industrial sector, which mainly comprises Small and Medium Enterprises (SMEs), accounted for about 15.2 percent of the GDP. The service sector comprising social services, trade and real estate among others accounted for about 46 percent of the GDP (IPDC, 2015).

It is un-doubtable that nations should reduce their dependency on the agricultural sector and supposed to be strong in the industrial sectors for sustainable economic prosperity and poverty reduction. The term industrial park is currently a very frequently used word under Ethiopian Economic Policies that it is necessary to concentrate different resources into one single place to see a positive influence on effective use of resource, infrastructures and increase employment rate and productivity. Development of industrial parks must pay attention to one of the basic aims of an economy, which is to allocate both industrial production and services sector in such a way, that progress of a region where a park is built improves. In Ethiopia, in order to ensure a proper management of the industrial parks, the Ethiopian federal government came up with the Industrial

parks proclamation no. 886/2015 which states that industrial parks can be developed by any profit-making public, public-private or private enterprise. The proclamation recognized the establishment of the Industrial Park Development Corporation (IPDC), which is in charge of managing the development of large, medium and light industrial parks and gave powers to the ministries of Industry and Agriculture for the development of integrated Agro-industrial parks.

The same proclamation stated that this investment is open to both domestic and foreign investors. The industrial parks developers are entitled to develop their own industrial parks, either independently or through public-private partnership with IPDC. With regard to large, medium and light industrial parks, IPDC is mandated to facilitate acquisition of land and providing infrastructure (IPDC, 2015). Currently the Corporation is aggressively engaged on establishing and developing industrial parks in Addis Ababa and other major towns. There are many industrial parks that already started operation, and 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. From these corporate developed are:

Table 2.1 Federal Government Developed Parks

No	Name	Location	Main industry	Progress	Size
1	Bole Lemi Industrial Park I	Addis Ababa	Apparel and Textile	Operational	157ha
2	Hawassa Industrial Park	SNNPR	Textile and Garment	Operational	400ha (100ha in phase I)
3	Mekele Industrial Park	Tigray	Apparel and Textile	Operational	1000ha (75ha in phase I)
4	Kombolcha Industrial Park	Amhara	Apparel and Textile	Operational	750 ha (75ha in phase I)
5	Jima Industrial Park	Oromia	Apparel and Textile	Operational	1000ha (75ha in phase I)
6	Adama Industrial Park	Oromia	Garment, Textile and Machinery	Operational	2000ha (365ha in phase I)
7	Bole Lemi Industrial Park II	Addis Ababa	Garment	Under construction	170ha
8	Kilinto Industrial Park	Addis Ababa	Pharmaceutical, medical equipment	Under construction	279ha
9	Dire Dawa Industrial Park	Dire Dawa	Assembling, garment, food	Operational	4000ha (150ha in phase I)
10	Bahir Dar Industrial Park	Amhara	Garment and apparel	Ready for operation	1000ha (75ha in phase I)
11	Arerti Industrial Park	Amhara	Construction products, home appliance	Under construction	100ha
12	Debre Birhan Industrial Park	Amhara	Apparel and Textile	operational	1000ha
13	Aysha Industrial Park	Somali	-	Planning stage	-
14	Airline and logistics Park4	Addis Ababa	Transportation	Planning stage	
15	Addis Industrial Village5	Addis Ababa	Apparel and Textile	Operational	80ha

16	Modjo Leather City	Oromia	Leather	Planning stage	
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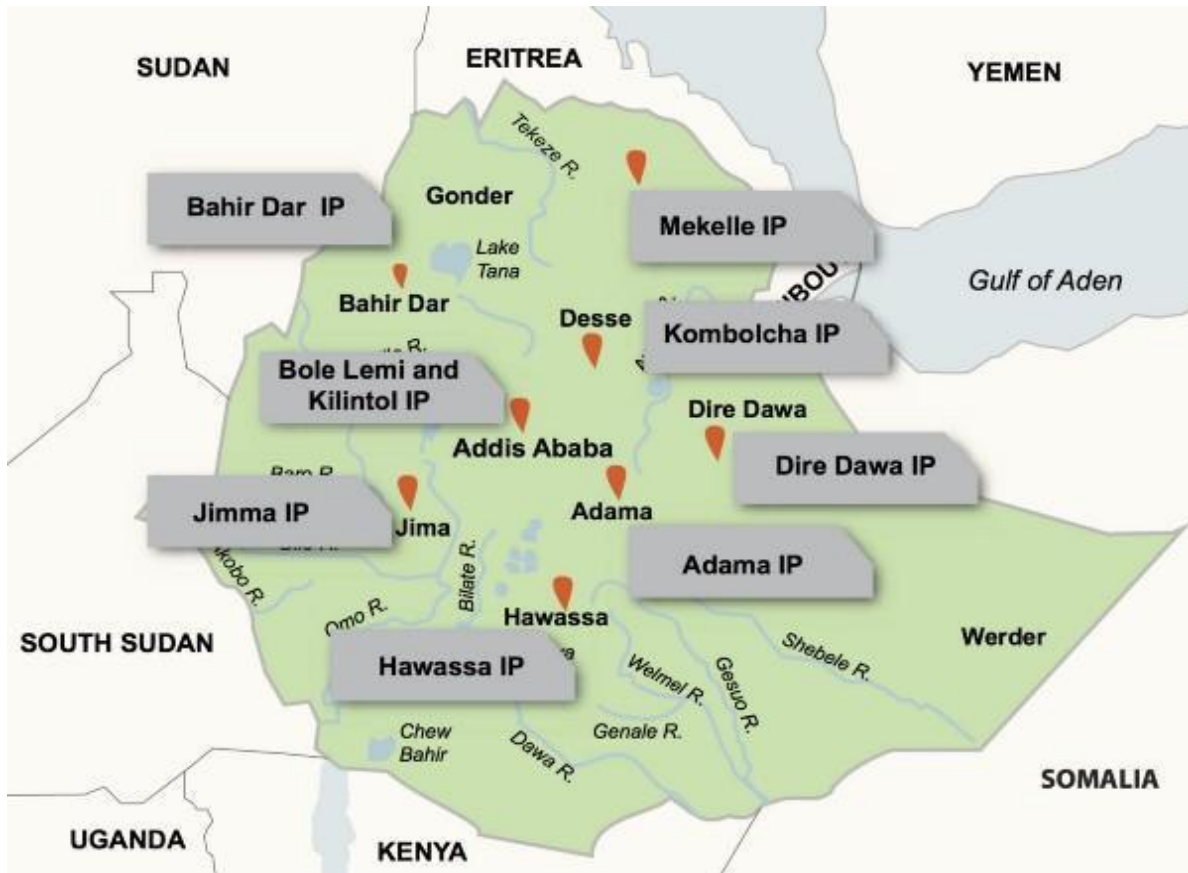
Source IPDC

Table 2.2 Regional State Developed Parks

No	Name of Industry Zone	Location	Main industry	Progress	Size
1	Bure Integrated Agro-Industrial Park	Amhara	Agro-processing	Under construction	260.35ha
2	Bulbula Integrated Agro-Industrial Park	Oromia	Agro-processing	Under construction	263.09ha
3	Yirgalem Integrated Agro-Industrial Park	SNNPR	Agro-processing	Under construction	214.86ha
4	Baeker Integrated Agro-Industrial Park	Tigray	Agro-processing	Under construction	258.62ha

Source IPDC

Figure 2.1: Ethiopia's Industrial Parks Map (IPDC 2019)



2.2.7. Economic Contribution of Industry Parks

The ongoing second Growth and Transformation Plan (GTPII) of Ethiopia, and its industrial development strategy are all centered agricultural-based, manufacturing sector driven and export-led development. The GTP pursued the growth through the export driven industrialization strategy focusing on: -labor-and capital-Intensive manufacturing industries, export-oriented and import substituting industries, contribute to rapid technology & know-how transfer, have broad linkages with the rest of the economy, and use Agricultural Products as Inputs (Agro-processing) (GTPII).

The key strategic directions are small and medium scale industrial development; and large-scale industries with special emphasis all geared to poverty alienation & development.

The manufacturing industries that have given due attention are Agro-processing industries, textile and clothing, food and beverage industries, tannery and leather goods, pharmaceutical industries, chemicals and chemical products industries, paper and paper products, plastic industries, building materials, glass & glass products, metal & metal engineering etc. to mention a few,(IPDC,2018).

The overall objectives studded in the GTP are create competitive environment for industrialists, create employment opportunities, support sustainable development of agriculture, increase productivity and production, create linkage between small, medium and large industries, ensure technological transformation and capacity building, create strong foundation for the sectors to start playing leading position in the national economy, foreign exchange earnings and savings.

The main purpose of developing industrial zones (according to GTP) is to attract more investment and investors by providing land with essential infrastructural services and creating an attracting environment for investors. The initiative contributes to the overall economic development and poverty eradication by creating employment opportunities, enabling increased exports and foreign currency earnings, and providing local goods.

Considering the fact that the industrial park is a limited area in which economic, research, manufacturing and services activities are being developed so as to grow and enhance the natural and human resources of the area, involving local authorities to improve the state of networking among

institutions and the business community in supporting local economic and social development by setting up a managing company.

As of 2007, it estimates, IPs created about 68 million direct jobs and US\$851 billion worth of exports, accounting for about 41 percent of global exports (FIAS, 2008).

However, the global picture is quite heterogeneous. Based on disaggregated studies, the impact of SEZs (Special Economic Zones) in driving economic and private-sector development seems to be quite mixed across countries and regions.

Successful SEZ are able to attract large numbers of multinational companies and domestic firms, and to make great contributions to business investment, employment generation and economic development. In China, estimates show that the national-level SEZs (including various industrial parks) account for more than 30 million jobs and about 22 percent of national GDP, 46 percent of foreign direct investment, and 60 percent of exports (Zeng, 2010).

An analysis of panel data of 270 cities at the prefecture level (a jurisdiction between county and province in China) over 23 years finds that the introduction of a major zone in a city in the post reform years led to an average increase in the GDP level of 12 percent, with the effect depending on the type of zone. The long-term (cumulative) effect of an SEZ could be an increase of about 20 percent in the GDP level (Alder, S., et al., 2013). Another analysis (Wang 2013) of 321 prefecture-level cities between 1978 and 2008 shows: a) on average, an SEZ program increases the level of per-capita FDI by 21.7 percent, and the growth rate of FDI by 6.9 percentage points; b) the SEZ program generates significant agglomeration economies; it increases the technological progress of the earlier treated municipalities by 1.6 percentage points compared to the later ones; and c) the average wage of workers in the treatment group increases 8 percent more than in the control group.

Elsewhere in Asia, Johansson and Nilsson (1997) find that SEZs have positive impacts on exports in Malaysia, Mauritius, and Sri Lanka. Their findings indicate that SEZs are more likely to have a positive impact on exports when countries adopt outward-looking, export-oriented policies at the national level to promote their SEZs. In particular, Johansson and Nilsson (1997) highlight the case of Malaysia's "catalyst effect" on potential domestic exporters by filling an "ideas gap" in the market. In essence, by the early 1990s in Malaysia, SEZs attracted the right mix of foreign investors who brought along knowledge on how to master production, marketing and distribution of export

goods. This knowledge translated into spillover effects on the local market, and stimulated domestic firms to enter the export market and to increase their production of export goods, the authors contend. The Philippines has experienced tremendous economic growth through its eco-zones, which focus on Agro-industry, tourism, recreation, commerce and financial services. Eco-zones' share of national merchandise exports increased from 22 percent in 1995 to 76 percent in 2003, and eco-zones' share of national foreign direct investment increased from 30 percent in 1997 to over 81 percent in 2000 (FIAS, 2008).

Evidence from many parts of the world suggests the potential of the SEZ phenomenon to spur growth and employment. Examples include: The more than 7,000 firms at the Jebel Ali Free Zone in Dubai currently employ 170,000 people, or 13 percent of Dubai's workforce. By 2012, the Aqaba Special Economic Zone in Jordan had attracted \$18 billion in investment and generated 10,000 jobs. Eight zones in Bangladesh attracted 412 firms that have made investments totaling \$2.6 billion, and have employed 350,000 people (IFC, 2016). In the Dominican Republic, employment in industrial-free zones rose from 500 in 1970 to almost 200,000 in 2007, and in Costa Rica, the EPZ share of manufactured exports jumped from less than 10 percent in 1990 to 55 percent in 2003, with export items changing from mainly apparel and textile products to modular circuits and other electronic components (FIAS, 2008). In Madagascar, a \$165 million World Bank project contributed to a tenfold increase in the stock of formal enterprises and a near seven-fold increase in the number of formal jobs in the growth poles of Fort Dauphin and Nosy Be, despite a complex political environment. The project successfully integrated a number of reforms to improve the business climate and job creation around these growth poles (World Bank Group, 2016).

However, the impacts of SEZs are not uniform, as analyses of various outcomes show.

In some countries, SEZs have not positively affected exports. Johansson and Nilsson (1997) assert that countries that fail to eliminate trade restrictions, and fail to adopt export-oriented strategies are less likely to experience positive impacts on exports. They highlight examples from Mexico and the Dominican Republic. For example, the Dominican Republic developed a rationale for SEZs and created what many considered to be successful SEZs with catalyst effects, increased employment and high levels of productivity (Rhee et al., 1990); nevertheless, SEZs in the Dominican Republic did not have a significantly positive impact on exports. The country continued to practice import substitution policies and maintained a series of trade barriers, which Rhee et al. argue stunted the impact of SEZs

on exports. SEZs in the Dominican Republic today continue to be largely isolated from the rest of the economy (Carneiro et al., 2015).

In South Asia, Aggarwal (2005) and Aggarwal et al. (2008) assess the impact of SEZs on export diversification but find SEZs have mixed results. For instance, in 2008, after a 40-year-long record with SEZs, India's SEZ exports represented only 5 percent of overall exports; by contrast, in a short span of time, SEZ exports accounted for nearly one-fifth and one-third of exports in Bangladesh and Sri Lanka, respectively (Aggarwal, et al., and 2008). At the time of these findings, India was undertaking a major expansion of its SEZ policy; nevertheless, recent studies, including a report by the Comptroller and Auditor General's office in India, continue to highlight the mixed success of India's SEZ policy (CAG, 2014). However, in other instances, such as the garment industry in Bangladesh, more directly observable linkages emerge between the creation of SEZs and increases in export productivity.

Substantial evidence shows that SEZs have played an important, catalytic role in the industrial upgrading and technology transfer in the newly industrialized East Asian economies, especially in South Korea, Taiwan (China), Malaysia and the Philippines, where significant industrial upgrading has occurred in the electronics sector located mainly within industrial zones (Lall, 2000). The Philippine Economic Zone Authority has documented substantial rise in skills levels in the Philippine eco-zones where major activities have shifted from production to design and R&D (FIAS, 2008).

Due to limited resources and implementation capacity, developing countries often cannot create the business environment, or build enabling infrastructure nationwide all at once. In addition, developing countries often have limited political capital to defend policies and reforms against vested-interest groups and political opposition (Zeng, 2015b). This makes targeted interventions or a pilot approach necessary, especially at the initial stages. SEZs are able to create a better business environment in a geographically limited area, through a more liberal legal and regulatory framework, efficient public services, and better infrastructure within the zone, including better roads, power, water, and wastewater treatment. Some newer-generation zones are even becoming the drivers of green development and eco-industrial cities (Zeng, 2015b). Some economic research finds that SEZs are welfare reducing (Chen, 1995; Hamada, 1974; Hamilton & Svensson, 1982; Wong, 1986), and other research raises concerns that SEZs may become "enclaves" (Kaplinsky, 1993).

At the same time, other research shows that overall social welfare may be improved under certain conditions, such as by attracting foreign direct investment and through enhancing export diversification (Alder et al., 2013; Jenkins et al., 1998; Miyagiwa, 1986; Wang, 2013). Empirical research shows that many SEZs have attracted foreign direct investment, generated jobs and exports, and demonstrated a marginally positive cost-benefit effect (Chen, 1993; Jayantha Kumaran, 2003; Monge-Gonzalez et al., 2005; Warr, 1989; Zeng, 2010; Fuller and Romer, 2012). Examples are quite evident, especially in East Asian experiences.

In general, if implemented successfully, SEZs confer two main types of benefits, which in part explain their growth in popularity: “static” or “direct” economic benefits such as employment generation, export growth, government revenues, and foreign exchange earnings; and the more “dynamic” or “indirect” economic benefits such as skills upgrading, technology transfer and innovation, economic diversification, and productivity enhancement of local firms. (Zeng, 2010).

Table below provides a list of possible benefits from successful SEZ programs. In general, the “Indirect” benefits are harder to achieve unless the zones are very successful.

Table 2.3: Potential Benefits of Successful SEZ programs

	Direct benefits	Indirect benefits
Employment Generation		
Foreign exchange earnings		
Foreign direct investment		
Government revenue		
Export growth		
Skills upgrading		
Testing field for wider economic reform & Demonstration effect		
Technology transfer & adoption of modern management practice		
Export diversification		
Enhancing trade efficiency of domestic firms		
Cluster facilitation		
Urban and regional development, & even green growth		

Source: White (2011)

2.3. Empirical Literature

Different researchers in different countries investigated the economic contributions or impacts of industry parks from different perspectives. In this subsection, the methodology used and findings identified on studies conducted on contributions and challenges measurement factors/criteria/are reviewed.

There are evidences that show the real contribution of industrial parks in both developing and developed countries. The following are some of the evidences that show the real contribution of industry parks. In most case, the primary goal of the industry parks is to alleviate unemployment problems. In this regard, industry parks have been recognized as a potential sector to minimize unemployment problems in developing and developed nations. As Yeohet, 2005 Singapore investigated that the sector of industrial parks is a major source of urban employment in most Asian and Latin American countries. Among individual countries for which statistics are available: India, Pakistan, Indonesia, Malaysia and in the case of Latin American countries, Paraguay, Bolivia, Brazil, Argentina. Kiselakovaetal, 2014 investigated to identify and analyze the key macroeconomic factors affecting the establishment and entrepreneurship in industrial parks with positive effects on sustainable regional development in Slovakia.

Foreign investors have according to several international empirical studies more positive impact on entrepreneurship of economies than domestic investors. The reason is mainly that they bring know-how, new technologies, management processes and practices, marketing strategy, increasing competition etc. with them. The most significantly is this effect seen in cases of strategic investment that produce a multiplier effect in the connected sectors. Hudec, O. (2009) investigated the cash flow of the economy because of industry parks in Slovakia. Hollander, R. (2009) studied the role of import substitution on sustainable development because of industry parks in Leipzig, Germany. From the angle of constraints, theoretically, different constraints which hinder the operation of industry parks may exist. However, in this sub section we are going to see the real constraints/challenges that hinder the operation of industry parks in different countries. Even though, the industry parks have vital contribution to a countries economy, it is not operating without problems. There are different challenges that impede or hinder the

operation of industry parks especially in developing countries. As identified by various studies, the major challenges that hinder the operation of the sector mostly associated with the following areas: market, bureaucracy, language and cultural difference, infrastructure, technology, information access, and etc.

Turab, 2012 studied the major constraints faced by Punjab industry parks, Pakistan. Accordingly, they find out four main constraints: Electricity, Inadequate workforce, access to raw material and corruption. Zarqa Journal for Research and Studies Humanities (2010) by Ebrahim Khrais (Jordan) investigated the main challenges based on the low level of basic services and infrastructure, delay at the visa, customs and clearance process at the airport, negative impact because of high competitiveness.

The relationship of dependence between factors of regional growth, investments, and investment costs for setting up industrial parks and effects on regional development was surveyed by identified main localization factors relevant to the management of support and establishment of industrial parks in Slovakia are: status of foreign direct investments, employment of persons, governmental financial support–investment incentives, marketing strategy to attract investors, overall readiness and availability of the industrial area with focus on the positive effects of regional development, using regional GDP per capita, In particular to reduce regional unemployment rate.

2.4. Conceptual Framework

The Ethiopian government has been intensively engaged in the construction of industrial parks whose commercial spaces are mainly rented to foreign investors. The construction of these parks is financed principally through loans. The effect of such investment on the Ethiopian economy is transmitted through two channels. First, the construction of industrial parks attracts foreign direct investment, which injects new capital into priority sectors in the parks and increases their production. FDI is an endogenous variable. The flow of FDI also increases total factor productivity of priority industries operating in the parks, empirical evidence of which is provided by Kokko (1994), Xu (2000), and Yanni kaya (2003).

Second, the major development outcomes from the successful operation of industrial parks are targeted to accelerating overall development in providing productive employment opportunity for the population, technology, knowledge and skill transfer (Farole, 2011).

Third, Export revenues are the major source of foreign exchange resources that are badly needed for development. The figure below summarizes the idea.

Figure 2.2.

Independent Variables



Dependent Variable



Source: Developed from Theoretical and Empirical Literature review

CHAPTER 3. RESEARCH DESIGN AND METHODOLOGY

3. Introduction

This chapter discusses the methodology followed in testing the hypothesis to answer the research objective. It presents Research design, types and source of Data, Model specification and method of data analysis.

3.1. Research Design

To address and achieve objectives of the study, both descriptive and explanatory research design adopted to examine the economic contribution of industrial parks for the period covering from 2015 to 2019 using secondary data.

3.2 Types and Sources of Data

Regarding the type of data, the study used secondary data ranging from 2015-2019. This thesis used quantitative time series data for answering the research question to register quantifiable change. The data collected from the Industrial Parks Development Corporation (IPDCs), Ethiopian Investment Commission (EIC), National Bank of Ethiopia (NBE), Ministry of Industry (MoI), World Bank, and IMF. In addition, written documents on industrial park development projects, different reference books, journal articles, Internet web sites, policies, and procedures were referred.

I had to collect data on FDI, export, employment opportunity, GDP, etc. by physically visiting different government institutions in Ethiopia, and comparing this with different international organization from different sources in order to rearrange and choose the most appropriate and reliable data.

A problem with datasets available from international organizations, such as the ones from IMF, World Bank is that they often have a missing data points, especially for least developed countries (LDCs) like Ethiopia. Likewise, data inconsistency across sources was the main and major challenge faced in this thesis but maximum effort has been made to verify from the multilateral

organization where IMF and World Bank have nearly similar data sets.

3.3 Variable's Definitions

Real Gross Domestic Product (RGDP) =Real GDP is included to capture the performance of the economy. Economic growth is conventionally measured as percent rate increase in real GDP. It is measured as a log of nominal Gross Domestic Product (GDP) deflated by GDP deflator. It is the rate at which a nation's Gross Domestic product (GDP) changes/grows from one year to another and adjusted to the effects of inflation. It is the main outcome variable in this study.

Employment Opportunity

The chance to obtain additional benefits by supporting local development and the opportunity to create new jobs along with the income growth will positively influence the local economic development (Castells and Hall, 1994). The total numbers of jobs created in each park are will be examined in this study.

Foreign Direct Investment

The success of the IPs is closely linked to the competitiveness of the national economy. There is a strong correlation between the IPs' outcome and the level of national competitiveness and the national investment environment (Farole& Akinci 2011). Foreign direct investment is an investment in the form of a controlling ownership in a business in one country by an entity based in another country. So, in this study the study will focus on foreign companies that are fully in operation in IPs.

Export Revenue

Is the total revenue from total exported goods and services of the country? The net revenue from whole industrial parks export of output items are the researcher's focus.

3.4 Methods of Data Analysis

The methods of the empirical analysis employed in this thesis is descriptive based on correlation analysis. Descriptive analysis helps describe, show, or summarize data in a meaningful way that patterns from data might emerge. This includes trends of dependent and independent variables of interest indifferent graphs to depict the trends of data.

3.4.1. Correlations

When it is assumed that there is a liner relationship between two variables, Pearson's coefficient of correlation (simple correlation) method is the most applicable to measure degree of relationship between the two variables (Kothari, 2004). Hence, for dependent-independent analysis, the Pearson correlation was employed. A STATA 13, a statistical and data analysis software was employed when conducting the econometrics and statistical analysis.

CHAPTER FOUR: RESULT AND DISCUSSION

4. Introduction

This chapter presents the data analysis, discussion and findings of the study to answer the objective of the research using descriptive and econometrics analysis.

4.1. Descriptive Statistics

4.1.1 Employment Opportunity

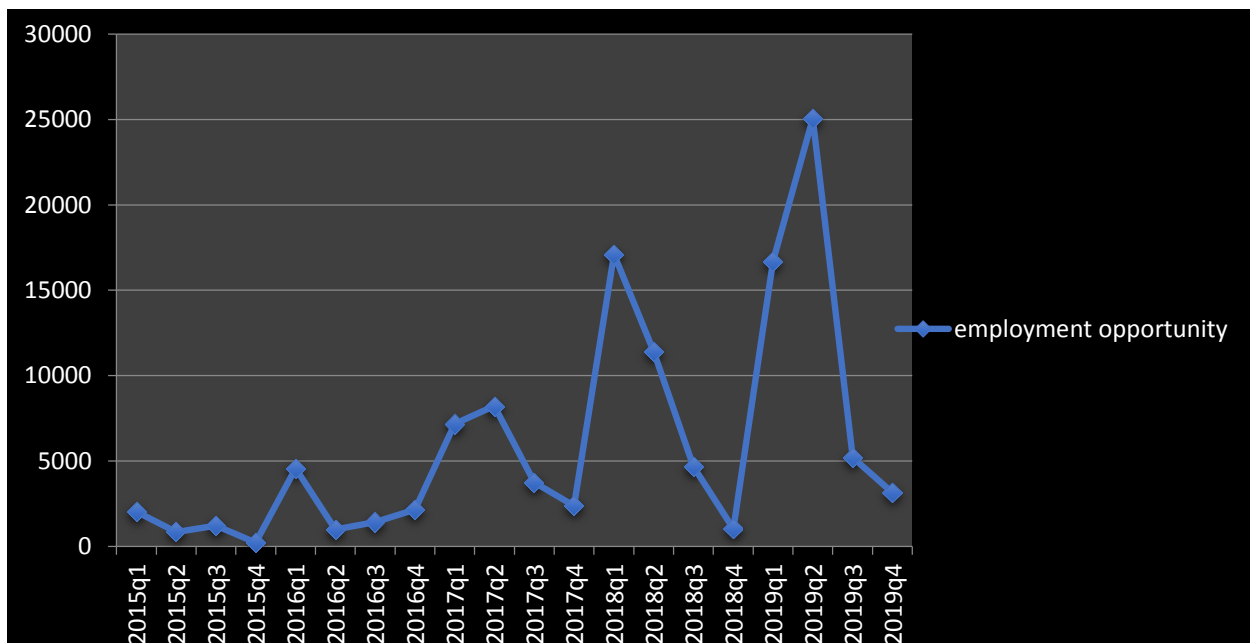


Figure 4.1: Trend analysis of Employment Opportunity

Source: my own computation based on IPDC data

As can be seen clearly from the figure above the number of employees hired by industrial parks starting from 2015 which is around 4300 increasing year by year at increasing rate and by 2019 number of jobs created by corporate IPs were 50125. The big reason for these significant increments is the additional industrial parks got into operation and the expansion of investment in industrial parks. Assuming current industrial parks are operating at roughly 50 percent of capacity, and extrapolating to the planned 22 industrial parks, a total of 170k new job creations are possible in the next few years.

On the other hand, one of the biggest challenges is the number of employees leaving the industry in industry parks is high. The reason for leaving the workforce is low wages and housing because of problems with housing and some administrative issue between employees and owner of firms. In addition, Industry Park has short of staff supply.

4.1.2 Export Revenue



Figure 4.2: Trend of Export performance

Source my own computation based on EIC and IPDC data

As shown on the diagram above, the trend of export revenue is increasing at increasing rate each year. By year 2015, the two operational parks (Hawassa and Bole Lemi I) export performance was 16,005,491.95 USD. In 2018 additional three Industrial Parks i.e. Mekelle, Kombolcha and Adama entered to operation totally 109,246,083.93 export revenue added to real GDP of the country. By year 2019, total export revenue obtained is 211.497.754.13 and there is 102,251,670.20USD annual increment from last year. According to IPDC report the total industrial parks contribution to the Ethiopian economy in terms of export revenue up to March

30, 2020 is 406,351,513.56 USD.

From the above diagram we can conclude that the total share of two oldest (comparatively) industrial parks (Hawassa and Bole Lemi I) is great. Despite their ages and other factors (such as political instability of the country, lack of foreign exchange, poor basic infrastructure in parks and others) getting into export by other four states owned IPs is a good hope for future performance. In general, the export performance was not well enough with the government plan and expectation.

4.1.3 Foreign Direct Investments

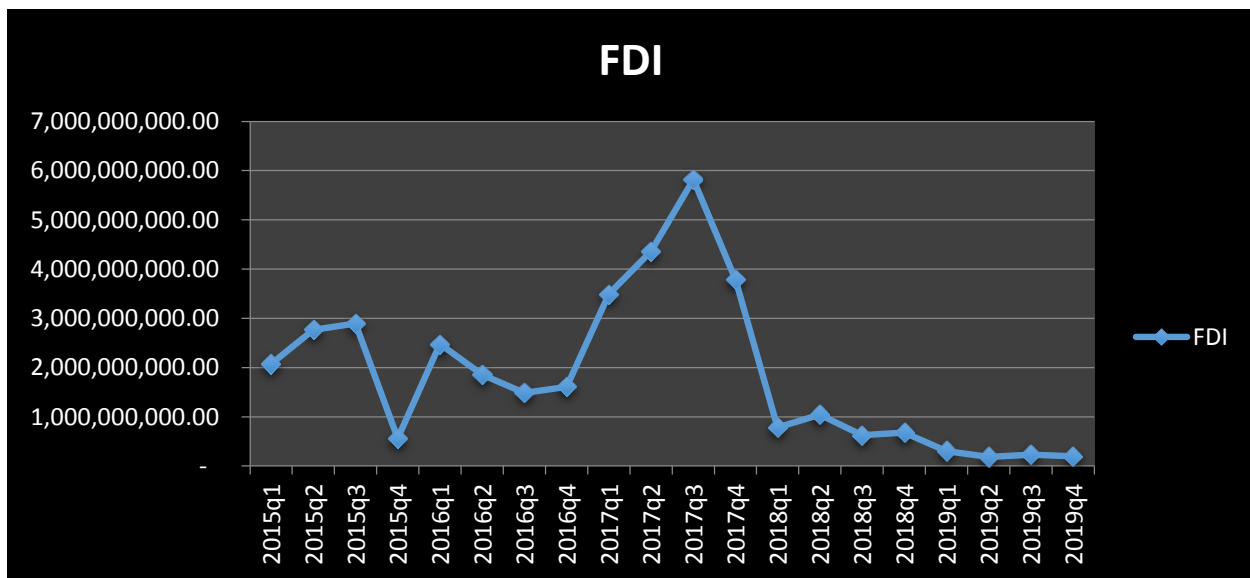
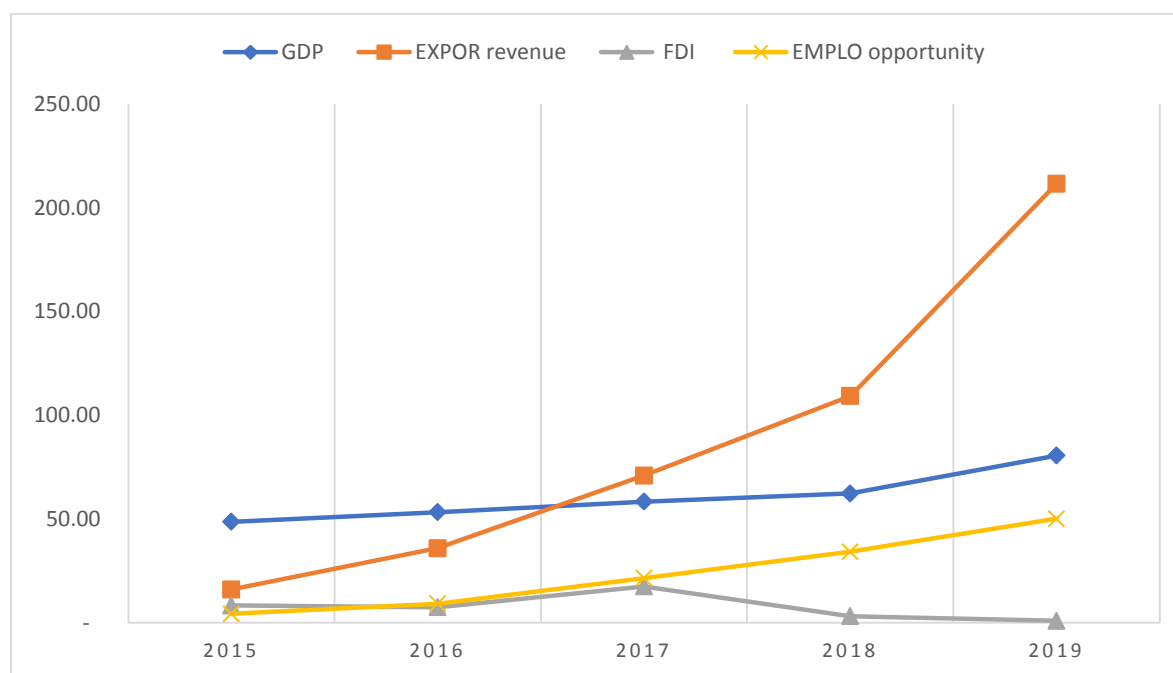


Figure 4.3 Trend analysis of FDI in Industrial Parks

Source my own computation based on EIC and IPDC data

As can be clearly seen the FDI trend in industrial parks starting from 2015 which were 8,297,973,000 \$US decreased by next year 7,434,149,000\$US. But by year 2017, the capital invested increased to 17,458,634,000 \$US, especially in second quarter the investment was significantly raised. However, by year 2018 and 2019 the inflow of FDI decreased to 3,124,788,000 \$US and 911,841,000\$US respectively.

4.1.4 Real GDP and Industrial Parks Contribution



Graph 4.4 Trend analysis of Ethiopian RGDP

Source my own computation based on EIC, IPDC and World Bank data

As can be seen clearly from the graph employment opportunity and export revenue to GDP increasing at increasing while FDI by year 2015 up to 2017 increase at decreasing rate and decreased at radically starting from 2018. By year 2015 FDI inflow was 8.30bln \$US and by 2017, increased to 17.46bln \$US. But in 2018 and 2019 the foreign direct investment in corporate parks were decreased to 3.12bln \$US and 0.91bln \$US respectively. The export revenue by 2015 was around 16mln USD, by end of 2019 this figure enormously increased to 211.50mln USD. The employment opportunity created starting from the beginning by two operational parks (Bole Lemi I and Hawassa Industrial Parks) was 4,300 and by end of 2019 year, corporate industrial parks were created 50,120 job opportunity. Therefore, this graph shows the growth trend of export revenue, employment opportunity and FDI to RGDP is in similar directions.

4.1.5 Correlation

It would have been more accurate to use a disaggregate data, such as quarterly FDI and quarterly export performance and quarterly number of employments; nevertheless, lack of sufficient long run data has made this approach undoable. Hence, this section analyzed the existence of linear association between dependent variable (RGDP) and independent variables, and then the direction of causality.

Employment opportunity

The growth sustained by the technology used in the industrial park opens opportunities for creating new jobs, improving local productivity and maintaining a competitive environment in the respective country (Markusen, 1986). In addition, producers operating in the industrial park will get greater benefits at lower costs. The chance to obtain additional benefits by supporting local development and the opportunity to create new jobs along with the income growth will positively influence the local economic development (Castells and Hall, 1994).

Table 4.1: Pair Wise Correlation between RGDP and Employment Opportunity

	RGDP	Employment Opportunity
RGDP (Pair wise correlation)	1	
Employment opportunity (Pair wise correlation)	0.5976 (0.0054)	1
Number of observations	20	20

Source: own computation in STATA based on data from Word Bank, EIC and IPDC. Note: Value given in bracket is P-value of the pair wise correlation, *** = significant at 10 percent level of significance.

As theoretical argument supports us, and Pearson correlation coefficient there is a positive and significant relationship between RGDP and number of employments in Ethiopian corporate industrial parks. As Cohen (1988), where $|r| > .5$ there is strong relationship between the two variables. By this argument the $|r|$ value of 0.5976 and significance level of 0.0054 are strongly correlated and significant at 10 percent of significance.

Export Revenue

Ethiopia's export sector is characterized by overdependence on few agricultural products, with very limited exports of manufactured and semi-manufactured goods. According to UNCTAD calculations, Ethiopia's diversification index is found to be 0.924 with a concentration index of 0.644 which is an evidence of a near complete specialization of the export sector in a few commodities.

Table 4.2: Pair Wise Correlation between RGDP and Export Revenue

	RGDP	EXPORT REVENUE
RGDP (Pair wise correlation)	1	
Export Revenue (Pair wise correlation)	0.7889 (0.0000)	1
Number of observations	20	20

Source: own computation in Stata based on data from Word Bank, EIC and IPDC. Note: Value given in bracket is P-value of the pair wise correlation, *** = significant at 10 percent level of significance.

As can be seen from the table above, the Pair-Wise correlation coefficient indicates that there is a positive correlation between RGDP investment and export revenue in Ethiopia, and it is significant at 10 percent level of significance. As guidelines of Cohen (1988) economically the effect can be taken as large/strong correlation as the magnitude is 0.7889. This could be due to the fact RGDP have large and significant share in the export-oriented production which makes the contribution of industrial parks to the country's export performance modest.

Foreign Direct Investment

The success of the IPs is closely linked to the competitiveness of the national economy. There is a strong correlation between the IPs' outcome and the level of national competitiveness and the national investment environment (Farole & Akinci 2011).

Table 4.3: Pair Wise Correlation between RGDP and FDI

	RGDP	FDI
RGDP (Pair wise correlation)	1	
FDI (Pair wise correlation)	-0.5211 (0.0185)	1
Number of observations	20	20

Source: own computation in Stata based on data from World Bank, EIC and IPDC. Note: Value given in bracket is P-value of the pair wise correlation, *** = significant at 10 percent level of significance.

The result shows that, there is an inverse relationship between RGD and FDI when one variable increase, the other decrease.

Theoretically, FDI can enhance the host country economic growth and capacity by directly exporting form IPs themselves and indirectly by stimulating domestic firms export propensity. The FDI enhancing power of RGDP is explained by the existence of multinational corporations and their interaction with domestic firms. The result indicates the value of $|r|$ 0.5211 which is strongly correlated and negative relationship between FDI and economic growth. This could be due to the fact that there are small numbers of foreign investors whose started export and have large and significant share in the export-oriented production which makes the contribution of foreign investors to the country's export performance modest.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

The main objective of this chapter is to present the conclusion and recommendation of the research result. To answer the objective of the research question, the paper used quantitative research design using Secondary data collected from Ethiopian Investment Commission (EIC), Industrial Park Development Corporation (IPDC), World Bank, National Bank of Ethiopia (NBE) and Ministry of Industry (MoI). The data was analyzed using descriptive and econometric method in order to examine the contribution of corporate industrial parks and Economic growth in Ethiopia.

5.1. Conclusions

Based on the research findings, the researcher concludes the following points:

Throughout this study, efforts have been made to explore the economic contributions of Industry parks in the study area. From economic aspect, the study has tried to see the contribution of the sector to the development of the economy in terms of generating job opportunities to the local people, capital investment to the country, and the level of export revenue. Till 2019, a total amount of 2019, 211.497,754.13 total export revenue obtained and regarding to the employment opportunity by end of 2019 a total of 50125 permanent job opportunities have been created.

The strength of the relationship between the independent variable, employment opportunity, Foreign Direct Investment, Export Revenue and the dependent variable, Real Gross Domestic Product over all is strong.

There is a positive and significant relationship between RGDP and number of employments in Ethiopian corporate industrial parks, and export revenue as well have strong and significant correlation RGDP. This could be due to the fact RGDP have large and significant share in the export-oriented production which makes the contribution of industrial parks to the country's export performance modest.

On the other hand, FDI is strongly correlated and negative relationship with economic growth. This could be due to the fact that there are small numbers of foreign investors whose started

export and have large and significant share in the export-oriented production which makes the contribution of foreign investors to the country's export performance modest.

5.3. Recommendation

Based on the overall analysis, the following recommendation has been made for the improvement of the role of Industry Park's contribution to the economy.

IPs has contributed a lot in the areas of employment opportunity creation, as the primary goal of industrial park establishment is employment generation. Beside this, more job should be done on increasing the capacity of each industrial parks in creation of employment opportunity. With regards of export revenue, the capital inflow was good as the sector is on infant stage. However, to achieve the government's goal and increase the revenue from export of industrial parks products, the more jobs should be done on product differentiation, solving political instability, and improve quantity and quality of exported goods.

The Foreign Direct Investment of corporate industrial parks in Ethiopia related negatively to the economic growth in this study. This might be because the number of Foreign Firms invested and getting to operation are small in number. To ensure the success of industrial parks, the government must attract foreign direct investment by developing special schemes and export-promoting strategies. Developing industrial parks with the required fully fledged infrastructure, creating stable and favorable environment in Human capital development by working together with universities (University Industry Linkage) Establishing a training and research centers to support the investors will be correlate positively FDI and economic growth of Ethiopia in the long run.

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Appendix

Correlation Output

	gdp	export~e	employ~y	FDI
gdp	1.0000			
	20			
export~e	0.7889	1.0000		
	0.0000			
	20	20		
employ~y	0.5976	0.7917	1.0000	
	0.0054	0.0000		
	20	20	20	
FDI	-0.5211	-0.4858	-0.3079	1.0000
	0.0185	0.0299	0.1867	
	20	20	20	20

