



*Empowered lives.  
Resilient nations.*

Understanding African experiences  
in formulating and implementing  
plans for emergence

# Growing Manufacturing Industry in Ethiopia

CASE STUDY







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## Abbreviations

ADLI	Agriculture Development – Led Industrialization	IAIPs	Integrated Agro – Industrial Parks
CADU	Chilalo Agricultural Development Unit	IFPRI	International Food Policy Research Institute
CSA	Central Statistical Agency	IPD	Industrial Parks Development
DPPC	Disaster Prevention and Preparedness Commission	IPDC	Industrial Parks Development Corporation
DBE	Development Bank of Ethiopian	MDGs	Millennium Development Goals
EEPA	Ethiopian Export Promotion Agency	METEC	Metal and Engineering Corporation
EIA	Ethiopian Investment Agency	MOFEC	Ministry of Finance and Economic Cooperation
EIC	Ethiopia Investment Commission	MOFED	Ministry of Finance and Economic Development
EPRDF	Ethiopian Peoples’ Revolutionary Democratic Front	NPC	National Planning Commission
ESSP	Ethiopia Strategy Support Program	PASDEP	Plan for Accelerated and Sustained Development to End Poverty
FDRE	Federal Democratic Republic of Ethiopia	SDPRP	Sustainable Development and Poverty Reduction Program
GDP	Gross Domestic Product	TFP	Total Factor Productivity
GERD	Great Ethiopian Renaissance Dam	UNDP	United Nations Development Programme
GTP	Growth and Transformation Plan	UNECA	United Nations Economic Commission for Africa

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## Foreword

This study was presented at the second edition of the International Conference on the Emergence of Africa (ICEA II) from 28th to 30th March 2017, in Abidjan, Cote d'Ivoire. The conference was jointly organized by United Nations Development Programme (UNDP), and the Government of Ivory Coast and in partnership with the World Bank and the African Development Bank (AfDB) under the theme "IMPLEMENTATION OF PLANS FOR EMERGENCE IN AFRICA". The ICEA is an opportunity for selected countries on the path of structural emergence, to share experiences and draw lessons from best practices in order to accelerate growth and structural transformation of their economies for the wellbeing of their people.

Special tribute goes to the organizers of the ICEA for selecting Ethiopia as one of the countries to share its rich and diverse experience on the growth of manufacturing industry. Ethiopia has over the past decade achieved strong and robust economic growth coupled with the expansion of social services. Current efforts are directed towards sustaining double-digit growth episodes by deepening structural change in the economy and visioning to become a lower middle-income country by 2025. The country's mid-term plan (GTP II) underscores emergence in the form of desirable outcomes of structural transformation in a relatively shorter period of time by redirecting activities to high productivity sectors, in particular, the manufacturing sector. Industrialization is accepted as the only viable way of ensuring structural transformation. Industrialization and ensuring emergence with an active role of the state has been in place since 2011 with the launch of the first growth and transformation plan (GTP). The ICEA provided

a platform for Ethiopia to share its experience and UNDP Ethiopia would like to thank the UNDP Regional Bureau for Africa (RBA), under the leadership of Mr. Abdoulaye Mar Dieye, Director of the Regional Bureau for Africa, and Mr. Ayodele Odusola, RBA Chief Economist for the support and guidance provided throughout the formulation and drafting of this study.

This report was prepared under the stewardship of the Policy Advisory Unit team led by Mr. James Wakiaga, Economics Advisor, UNDP Ethiopia and Mr. Haile Kibret, National Economist, with the leadership, guidance and support from Ms. Ahunna Eziakonwa-Onochie, UNDP Resident Representative and UN Resident Coordinator in Ethiopia and Mr. Samuel Bwalya, UNDP Country Director. Special mention goes to our independent consultant Dr. Seid Nuru, who tirelessly worked with PAU team in conducting the study. The report has benefitted from a wide range of reviewers whose contribution enriched the case study, this includes, the UNDP Ethiopia Policy Advisory Unit (PAU) team, RBA Strategic Policy Advisory Unit team, Regional Bureau for Africa, RBA Economists who have provided extensive comments as well as valuable comments from National Planning Commission of Ethiopia, just to mention a few.

This report is showcasing the achievements of the country embarking on transforming its economy via the industrial sector particularly in the light manufacturing sub sector. The report will serve as a pivotal reference document to policy makers and planners within Government, the private sector, academia, development partners and civil society.



Ahunna Eziakonwa-Onochie  
UNDP Resident Representative



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## Executive Summary

Ethiopia has embarked on a transformational journey of becoming a low middle-income carbon-neutral economy by 2025. To attain this goal, Ethiopia needs to sustain the high growth episodes that have been observed over the last decade by **deepening structural change in its economy**. The Second Growth and Transformational Plan (GTP II) (2015/16-2019/20) envisages an emergence **in the form of desirable outcomes of structural transformation** in a relatively shorter period of time as in the case of South East Asian countries. This is to be achieved by shifting economic activities from low productivity to high productivity sectors, especially in the manufacturing sector. The pursuit for industrialization **is the most viable option for ensuring structural transformation**.

The current policy response for industrialization through the State's active role has benefitted from the country's long-held tradition and experience of planning over several decades, evident since 2010/11 with the launch of the growth and transformation plan (GTP). Planning in Ethiopia began as early as 1945 when a ten year industrial strategy was elaborated. A formal five – year development plan was launched in 1957 during the **Imperial Government of Ethiopia** with the major objective of laying foundation for an economic take-off.

**The first five year development plan (1957 – 1961)** focused on infrastructure, human capital formation (education), and resource mobilization. **The second five year development plan (1963 – 1967)** which was part of a development plan with a target to double income in 20 years gave priority to the industry sector in particular the agro-processing industry, mining, and power generation. With the active intervention of the Imperial Government, the manufacturing sector grew at an annual average rate of 16 per cent thus pushing the share of the industrial sector from 9 per cent to 13 per cent during the planning period. Most importantly, the monetized sector expanded by 5.7 per cent per annum. **The third five- year development plan (1968 – 1973)** gave more emphasis to the agriculture sector in order to fill the gap in raw materials and domestic demand for industrial outputs that emerged during the implementation of the second five- year development plan. The active interventions of government

in commercial agriculture across major agro-ecological zones of the country served as a basis for surplus production in the sector.

Discontent among the youth elite in the land tenure system, coupled with emergence of features of socialism in the world politics subsequently deposed the Imperial regime through a military takeover. Planning gained more currency during the socialist regime. Nationalization of major agricultural industrial capabilities, forced quota deliveries, and collectivization as demanded by socialist dogmas replaced market principles of self - interest with virtue. The unpopular policies coupled with civil and regional wars led to the malfunctioning of the economy: per capita GDP was declining at a rate of 1.4 per cent per annum over the 17 years reign of the regime (1973/74 – 1990/91).

Market economy was restored in the country after the incumbent Ethiopia People's Revolutionary Democratic Front (EPRDF) government took power in 1991. In 1995, a **policy of agriculture development led industrialization (ADLI)** was introduced. Agriculture used to account for more than 50 per cent of the GDP and about 90 per cent of the export earnings. Moreover, 85 per cent of the population was engaged in the subsistence agriculture. Such a structure of the economy justified ADLI's official bias in favor of rural development. Important focus areas during the early years of the first GTP were food security, education and infrastructure.

Ethiopia's experience in the last two decades has demonstrated that emergence is a process where sequencing and smart prioritization of policy targets is critical. There is a need to understand that development processes are iterative where past experience informs the present. Pragmatism in approaches to development and seeking alternative paradigms becomes key. In all these, the role of the state is crucial. The series of development plans produced over the last two decades demonstrated how every new plan was built on the lessons of the previous plan. In 2003, a three – year development plan entitled – **“Sustainable Development and Poverty Reduction Program (SDPRP)** was launched to mainly pursue the tenets of the ADLI policy. As a result, SDPRP gave more emphasis to ag-

riculture, education, and infrastructure development. The country recorded a GDP growth rate of 5.9 per cent during SDPRP. In comparison to a population growth rate of 2.9 per cent during the same period, the growth observed under SDPRP was not enough to lift many people out of the quagmire of poverty.

One major gap during the implementation of SDPRP was the apparent neglect to the demand side of the economy, in particular the urban sector. Periods of bumper harvest in the agricultural sector were characterized by low prices which in turn became disincentives to surplus production. A new development plan entitled “**Plan for Accelerated and Sustained Development to end Poverty (PASDEP)**” was introduced in 2005. The new plan built on the priority sectors that were identified in the SDPRP. The focus given to urban development was a new commitment. Public investments in social and economic infrastructure in major urban centers and private investment in the construction sector augmented demand in the urban centers significantly. Agriculture responded to the rise in demand in high growth. Overall, real GDP grew at an average annual rate of 11 per cent over the five-year plan period. Service and agriculture sectors led the growth momentum, having contributed 55 per cent, and 36.6 per cent, respectively, to the 11 per cent growth in GDP. That is, out of the 11 per cent growth in real GDP, 6 percentage points, and 4 percentage points were the shares of the service, and agriculture sectors, respectively.

**Two major legacies of PASDEP** were the high growth that was robust enough to have slashed poverty significantly (from 38.7 per cent in head counts ratio in 2005 to 29.6 per cent in 2011), and the inspiration that the country was well positioned to now emerge as a viable economic power. In fact, the proportion of people below the poverty line in 1996 was 45.5 per cent. Nevertheless, the record high inflation that had accompanied the high economic growth appeared to have shown a limit to the public investment-led demand driven growth. By the end of the PASDEP period, it was realized that the high growth episode that had been achieved during PASDEP could only be sustained through deepening of structural change, by prioritizing the role of manufacturing sector in the national economy. In particular, the manufacturing sector was expected to play a catalytic role in driving the growth momentum, employing factor inputs (mainly labor), and changing the structure of the export which was dominated by agricultural primary commodities. In a nutshell, structural transformation beyond an episode of high income growth became critical. As a result, the first **growth and transformation plan (GTP)** was in place by 2010/11 with the aim of laying the foundation for structural transformation.

In the first Growth and Transformation Plan, the economy was projected to grow at an average annual rate of 11 per cent over the five year plan period (2010/11 – 2014/15). As the private sector was perceived to have inclined toward the service sector with quick returns, the government decided to invest strategically in the manufacturing sector.

Sugar, fertilizer, metallurgy, chemical, pharmaceuticals, and cement industries were among the strategic areas that the Government planned to invest \$11.5 billion over the planned period. Cognizant of the major infrastructural bottlenecks to implement the targets on investment in the manufacturing industry, the plan had also targeted major investments on economic infrastructure such as energy, road, railway, and telecommunication, with a total planned investment of \$21.3 billion. The energy project was planned to increase the nation’s total energy generation from 2,000 MW in 2010/11 to 10,000 MW in five to seven years’ time and this was envisaged to increase the electricity access coverage from 41 per cent to 75 per cent. The plan on the railway construction aimed to meet mass transportation needs with a coverage of 2,395 km railway stretch line. The 34 km Addis Ababa light railway transit project was part of the plan for mass transportation. The Addis Ababa condominium integrated housing project was designed to curb the rampant housing problem in the city and to encourage the practice of saving for low income earners. Moreover, about 70 per cent of the total government budget was allocated to projects related to poverty reduction such as education, health, roads, water and sanitation, agriculture and food security among others.

**The performance of the GTP had mixed results.** Real GDP grew at an average rate of 10 per cent over the five-year period against a target of 11 per cent. Largely owing to the condominium housing project, the Great Renaissance Dam Bond, expansion of financial services through the branch network drive and other modalities of domestic resource mobilization, domestic saving rates increased from 9.5 per cent of GDP in 2009/10 to 21.8 per cent of GDP in 2014/15., Gross fixed investment rose from 22.3 per cent to 39.3 per cent of GDP in the same period. Investments made in the social sectors such as education and preventive health care systems yielded encouraging results in the form of high enrollment ratio in all levels of education and decreased rates of infant and under-five mortality. Modest performances have been observed in the infrastructure development with delays in some projects due to financial constraints. Nevertheless, the target of deepening structural change was challenged due to delays of investment projects in the sugar and fertilizer industries. The delay in these key projects coupled with the fall in international commodity prices added stress to the foreign exchange earnings of the country at the critical time when capital imports were expected to rise.

**The implementation of GTP I revealed important gaps in the key goal of structural change.** Fundamental problems included limited domestic technological capability, lack of institutional transformation, and limited readiness for industrialization in the area of infrastructure, and strong inertia of social duality with entrenched customs in the rural sector.

Leaving possibilities of rent seeking tendencies aside, one plausible explanation for the delay of the key projects

in the manufacturing industries, for instance, is the **gap in the domestic capacity in terms of skill and technological know-how**. The rationale behind awarding such complex projects to domestic contractors was to understandably build national capacities in industrial engineering. However, the planners should have foreseen the long learning curve required to assimilate to new technology as it contains elements of explicit (coded) and tacit (uncoded) knowledge where the latter is difficult to transfer. Ethiopia has a strong culture of agriculture. Industrialization is a new culture the country is embracing in a relatively short period of time. Specific problems in the manufacturing sector include foreign exchange constraints to imports, intermittent power interruption and limited access to electric energy, shortage and irregular supply of domestic raw materials due to weak linkages, limited access to and poor quality of internet services, and weak logistical support that leads to high transaction costs. These and other associated constraints contributed to limiting the average capacity utilization of the medium and large scale manufacturing industries at 67 per cent. The answers to the whys of these problems may still point to the more fundamental problems such as weak institutions.

**The second GTP (GTP II)** was launched in 2015/16 as a continuation of the plan that preceded it to deepen structural change in the country by redressing the challenges encountered during the implementation of GTP I. The plan has identified **key elements of structural transformation at macroeconomic level**. These include high economic growth, high rate of capital accumulation, structural change, macroeconomic stability, and institutional transformation. It envisages 11 per cent average annual economic growth rate, domestic saving rate to increase from 21.8 per cent to 29.6 percent, gross fixed investment from 39.3 per cent to 41.3 per cent, value of exports as per cent of GDP from 9.8 per cent to 20.6 per cent, and resource gap to reduce from 17.5 to 11.5 per cent of GDP in the plan period of 2015/16 to 2019/20.

A sizeable component of the 11 per cent growth is to emanate from the industrial sector. **The main objective of the industrial development strategy** is to ensure that the manufacturing industry becomes the main driver of growth to accelerate the structural transformation in the Ethiopian economy in general and be a source of productivity, export earnings, a medium of technological transfer for overall technological capability, and a source of employment in the changing rural – urban demographic balance in particular.

**The new policy drive towards manufacturing sector development** is anchored on a number of imperatives aimed at increasing productivity, quality and competitiveness among both existing and upcoming manufacturing industries; investing in labor intensive light manufacturing industries with global standard of quality and efficiency; increasing the capacity of industrial engineering technology; and diversifying the country's export towards light and heavy manufacturing.

**The plan targets an average growth rate of 20 per cent per annum of an industrial output** in value-added terms over the five year plan period and increases the static share of the industrial sector in the GDP from 15.1 per cent in 2015 to 22.3 per cent by 2020. In particular, the manufacturing sector is envisaged to grow annually at a rate of 21.9 per cent during the same period.

The successful implementation of such an ambitious **plan demands serious engagement between the government, the private sector, and other stakeholders in addressing the major bottlenecks constraining the sector**. Under GTP II, industrial parks development and regional cluster development for small and medium scale enterprises are the two major modalities or approaches designed to curb the constraints associated with the domestic capacity in industrial technology.

**The strategy of industrial parks development** which is being implemented by the Industrial Parks Development Corporation (IPDC) has a purpose of attracting foreign direct investment (FDI) in key strategic manufacturing industries, which in turn, would assist transfer technology to the local entrepreneurs, diversify the structure of the country's export, and generate employment. The IPDC, which has the vision of becoming an "innovative and leading eco-industrial parks developer and operator in Africa by 2025," is mandated to activate both pre and post investment servicing, availing land, and pre-built sheds equipped with all-encompassing utilities and infrastructural facilities with international standards of quality of service, labor security, and environmental safety.

**About 12 industrial parks for export processing, have been identified across the country based on proximity to market outlets, infrastructure, economic potential, and regional balance in development**. Almost all industrial parks are established along corridors of railway networks that are either completed or under construction and are on schedule. The construction of two major industrial parks in Addis Ababa and Hawassa has been completed with nine firms having started production in Addis Ababa and all sheds having been occupied in Hawassa.

**The regional cluster for the development of small and medium scale enterprises has the goal of basing the long-term industrialization program on indigenous people**. The program targets the youth, in particular, graduates from technical schools and colleges and provides them with financial and technical support in cluster sheds along the various regional states to start up small scale manufacturing industries. This project has the objective of inculcating the culture of industrialization among the youth and harnessing the future industrialists through learning by doing at a shop floor level. A compulsory graduation from small scale enterprises by each entrepreneur implies a vision for firm growth. The Development Bank of Ethiopia (DBE) will be responsible for supplying the loan requirement of the projects.

In addition, a project **on micro and small enterprise development is being developed to directly address the challenge of urban unemployment**. This project is complemented with an urban safety net program targets the urban poor to generate their own income from small businesses.

The input constraints due to high import prices for raw material and inadequate supply of domestic raw materials due to weak agricultural – industrial linkages are to be addressed through various input policies. In response to such weak linkages, the Government of Ethiopia plans **to establish integrated agro-industrial parks (IAIPs)** along the major agro-ecological zones of the country. The parks are aimed at attracting private investors to set up food processing plants, reducing post-harvest losses, adding value to local content of food, linking farmers in clusters to food manufacturing plants, securing forward linkages for the processed produce, and creating jobs and driving rural economic growth in the country. Complementing the goals of IAIPs with the aims of GTP II to link rural areas with road networks and making financial services accessible to rural areas in order to facilitate rural transformation, with changes in preferences and choice of technology by the rural people.

The **problem of power shortages and electric power interruption is expected** to be addressed once and for all when the Great Ethiopian Renaissance Dam (GERD) project is complete and begins the production of 6,000 MW electricity at full capacity. , The on-going project of upgrading the old transmission and distribution lines of

electric power and once completed will also address the problems. In the meantime, the recent completion of the Ghibe III hydroelectric dam with the capacity of 1,870 MW is equally expected to relieve the constraints in electric power sector.

The Government of Ethiopia has made it clear that **good governance** is fundamental to the successful completion of the various development goals and targets. In fact, building sound institutions is critical to a modern economy that Ethiopia is envisaging to become. The institutional transformation will be one of the key challenges under the GTP II. The country needs to build a national consensus on the notion that corruption is the worst form of exclusion.

Given that 73 per cent of the population is still engaged in subsistent agriculture, **agricultural transformation and preparedness for sustainable urbanization with smooth rural – urban migration** remains to be one of the critical challenges of the development process. The migration of people from the rural areas to the urban centers and hence the expansion of urbanization becomes inevitable. The challenge is how to make it sustainable in the face of many challenges and new demands.

Ethiopia may find it critical to **reform the labor market in such way that accountability is imminent; hard work, educational preparedness and excellence are rewarded**. Discriminating in returns in the form of wages and salaries and other incentives in key sectors would increase competence and discourage rent seeking from being a dominant strategy.



# 1

## Introduction



Africa's dependence on the production of primary commodities for export cannot be sustained in the face of a changing global context. Various narratives have been echoed on the urgency for a paradigm shift in charting a viable development pathway for the continent.

The inaugural International Conference on Emergence of Africa held in March 2015 in Abidjan, Cote d'Ivoire, under the theme of "Developmental State, Consumption and Production Patterns, and Human Development," all in the context of "Emergence of Africa" represented one such initiative- geared toward finding alternative development pathways. The concept and definition of *Emergence* is still evolving in development literature both in terms of concrete objectives and in setting measurable goals. A philosophical definition that can be shared with or adopted to the economic discipline is that *emergence* could probably be defined as an irreversible outcome of events or decision of various agents where the outcome has distinct features from inputs or processes which constitute it. A typical example of economic emergence is the socially important efficiency that can be gained from undesirable self-interest in economic decisions, a major insight of Adam Smith in his discourse on Inquiry to the Wealth of Nations.

The Abidjan notion for emergence was anchored on the dynamics that have shaped economic and social transformation in emerging economies such as China, Brazil, India, and Malaysia focusing on the developmental state, changes in the consumption and production patterns, and human development. Thus, the concept of emergence can tentatively be understood as an outcome in a way Africans uniquely aspire for sustainable decent socio-economic order from actions and reactions of stakeholders where government facilitates to speed up events towards the desired outcome. That is, emergence is a desired outcome of structural transformation at various levels of this process of interaction.

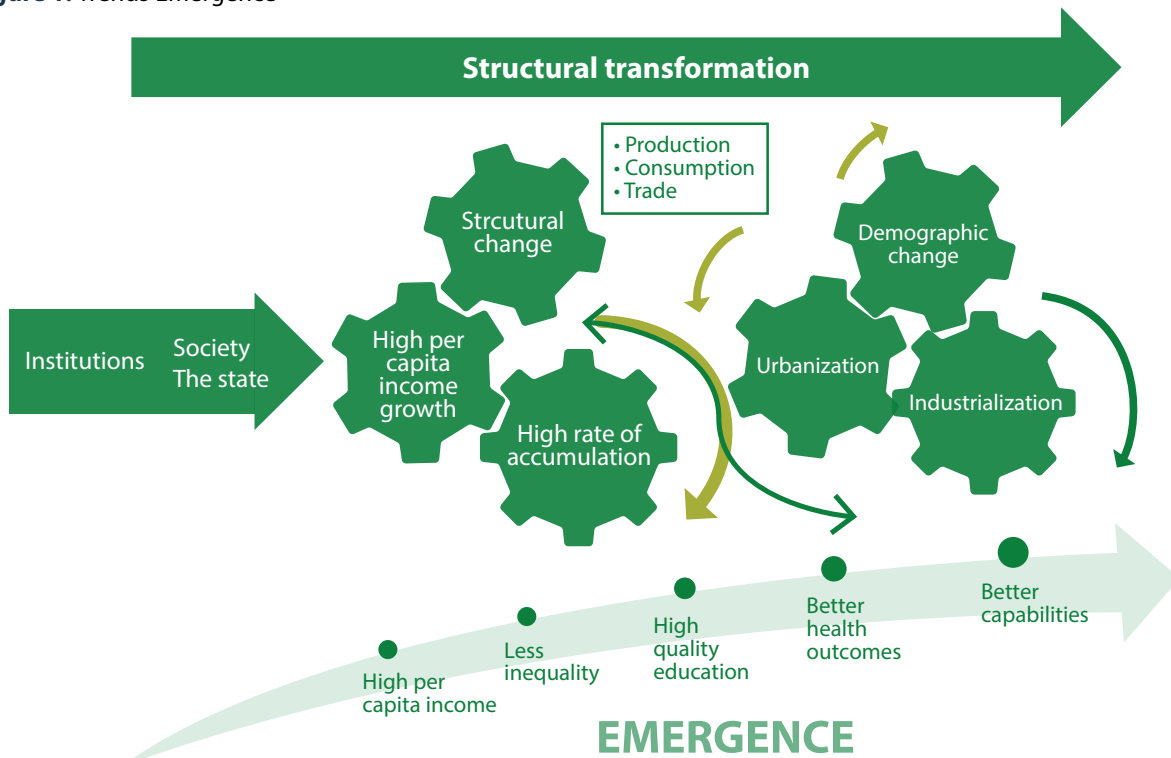
Two important elements of achieving emergence in a reasonably short period of time include the need for industri-

alization and the role of developmental state. Cognizant of this, Africa's industrialization agenda has lately taken center stage of policy discourse. For instance, UNECA's Economic Report on Africa dedicated the last 4 issues on the theme of industrial development in Africa titled: "making the most African commodities: industrialization for growth, jobs, and economic transformation," "dynamic industrial policy in Africa", "industrialization through trade," and "greening Africa's industrialization".

*Emergence* can be triggered by high income growth. However, high income growth does not necessarily result in emergence of a country. For a nation to qualify for *emergence*, high income growth needs to be accompanied by other features of structural transformation such as high rates of accumulations, and structural change. In particular, as long as there is a disparity among factor returns across sectors, reallocation of resources from low productivity sectors to high productivity sectors rewards in the form of high growth. The fact that developing countries, unlike the advanced ones, are characterized by a sheer level of differences in factor returns across sectors is a potential for growth. Such gains in the longer perspective are non-trivial accounting for "one-third of the measured growth in total factor productivity" [Syrquin, 1988].

Naturally, nations capitalize on their initial endowments for their economic take-off towards emergence. A typical feature of structural transformation that accompanies an emergence of a nation is that of systematically transforming natural capital to stages of physical capital, human capital, and social capital. A country's economy tends to undergo a transition from localized agriculture through stages of industrialization, globalized services, and social welfare. Whether structural transformation and emergence could occur simultaneously depends not only on whether countries are able to harness their initial endowments but also on the nature, quality, and type of capital to which those initial endowments are transformed.

**Figure 1: Trends Emergence**



A typical case in point is the different pathways both Botswana and South Korea chose to follow in their quest for *emergence*. South Korea, with limited natural resource to base its transformation, depended on political capital from its Western allies to cater for the initial financial resources to kick-start an economic take-off. As hard-earned money needed to be appropriated with a greater extent of thrift, South Korea managed to accumulate its capital capabilities at a rate of about 30 per cent of GDP. Botswana fortunately struck precious minerals, mainly diamond, and could accumulate capital at a high rate of about 50 per cent of GDP. Both Botswana and South Korea registered a double-digit economic growth per annum during their first high growth episodes. Specifically, for the fifteen years period between 1965 and 1980, GDP grew by about 14 per cent in Botswana and 10.5 per cent in South Korea. These periods were just episodes of high economic boom in both countries with two critical conditions of emergence apparently looking promising: high growth and high rates of accumulations. After the dust of short term economic boom settled in a generation or so, the difference between the two countries was stark and clear: South Korea claimed a status of an advanced country while Botswana seemed to have been trapped in the middle-income equilibrium [EEA, 2015].

While there might be various reasons for the differences in the final outcomes of the development strides achieved by the two countries at about the same period, the nature of capabilities invested in out of the high growth episodes mattered. Botswana invested in the mining industries with an eventual capability that adds little value and which could perpetually be challenged by global shocks. South Korea in contrast invested its meager resources in light

manufacturing with a policy-orientation towards export promotion and human capital formation. The result in the case of South Korea was a knowledge-based industrial capability that yields world class quality.

Chenery (1960) argued that “a rise in per capita income in a country is normally accompanied by a rise in the share of industrial output.” This has been associated with the change in the composition of demand where, according to Engel’s Law, the decline in the share of food dominates. There could however be exceptions to this pattern where change in the composition of demand follows a rise in income that can be offset by international trade as long as a country enjoys a continuing comparative advantage in primary production [Chenery, 1960: 624].

Thus, developing countries may trigger a high growth episode through comparative advantages in primary production, or public investment in social and economic infrastructure. The ensuing change in the composition of demand usually in favor of manufacturing goods following the short term economic boom has to be met either through export proceeds of the primary commodities or domestic capacity to produce manufacturing goods. Evidence shows that, in the long run, comparative advantages in primary productions are not sustainable. This makes a certain minimum level of industrialization a panacea for emergence while comparative advantages in primary production and even globalized services would be bonuses which facilitate structural transformation.

The major issue at stake is on how fast a country can transform its economy before the episodes of opportunities in



the form of high income and some degree of accumulations began to wane. The available evidence shows that no country has emerged with a revolution type of growth that transforms a typical developing country into a prosperous nation in one generation or so without some sort of active intervention of the state [Romer, 2009].

Chenery and Syrquin (1986), based on an empirical study of the dynamics of structural changes between 1960 and 1980, have concluded that the transformation pace of nations depends on the initial resource endowment of countries and trade policies. Fast transforming large countries may deepen structural transformation at the level of per capita income of USD 550 while a sluggish transforming small country specializing in primary exports may start deepening structural transformation at a per capita income level of USD 1,300.

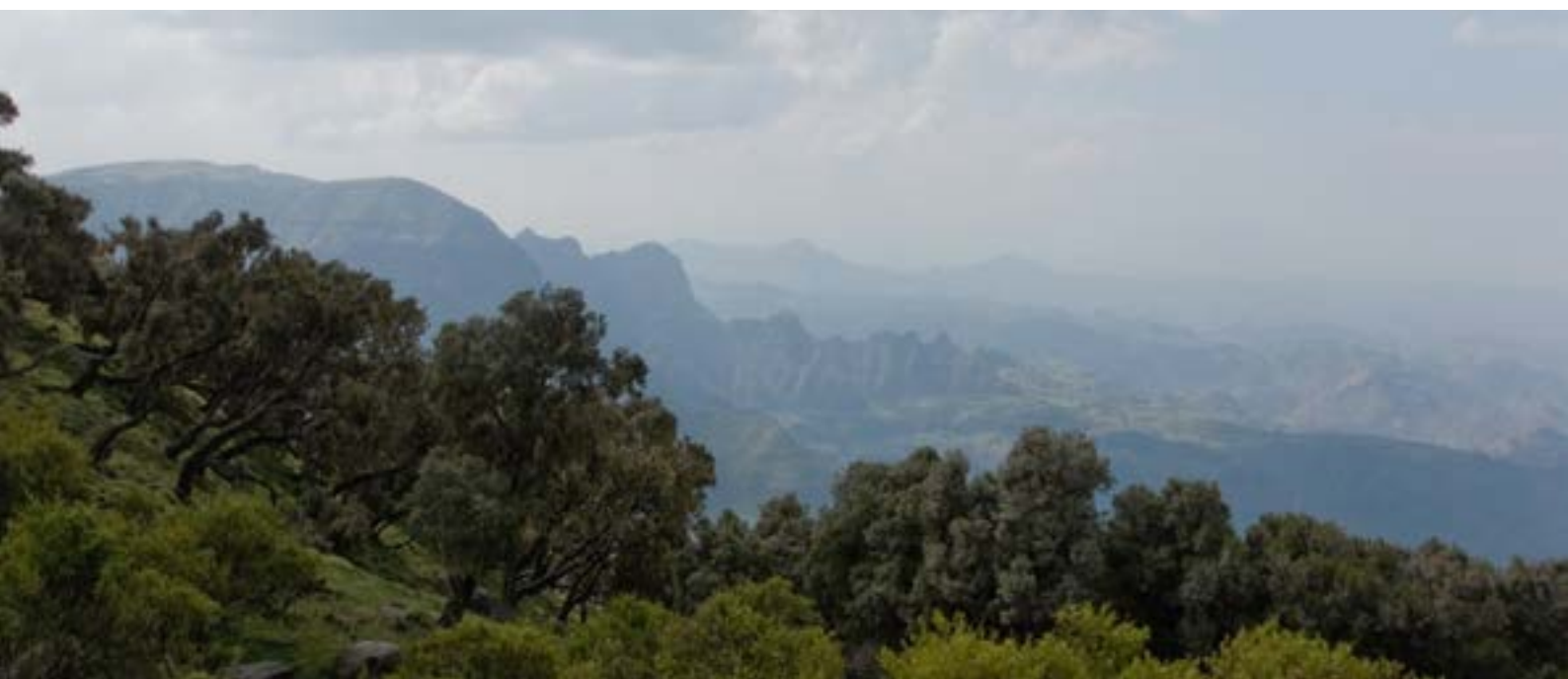
In general, the average pattern that emerged from empirical studies shows that large countries tend to perform in transforming their economies better than small countries among those which began transformation. Structural transformation is proven to have been facilitated by specialization in manufacturing instead of in primary commodities and outward instead of inward orientation. A large country specializing in manufacturing has an added advantage of large domestic demand in achieving early industrialization through a policy of import substitution. A small country with the ability to rally for foreign capital for its initial take off can still transform fast by specializing in light manufactured goods and capitalizing on export of light manufactures [Syrquin, 1988].

In summary, principal changes in accumulation of human and physical capital, shifts in the sectoral composition of economic activity (employment, production, trade, demand) which is best referred to as industrialization, changes in the location of economic activity which result in urbanization, demographic transition, income distribution, and changes in institutions that accompany a rising per capita income are the major elements of structural transformation [Chenery, 1988; Syrquin, 1988].

For countries which began transformation from agriculture, structural transformation that entails industrialization is also accompanied by big changes of agricultural transformation, and migration and urbanization [Chenery, 1988]. In a process that involves a change in the economic activity from primary to manufacturing implies inevitable urbanization. The policy challenge in this case becomes sustainable urbanization management.

Ethiopia, encouraged by the high growth episode that has been observed between 2005/06 and 2009/10 following its investment in social and economic infrastructure, agriculture and urban development under a plan called the Plan for Accelerated and Sustained Development to End Poverty (PASDEP), has launched its industrialization strategy under the successor five-year plan called the Growth and Transformation Plan (GTP) that spanned between 2011 and 2015. The performance of the first phase of the GTP I in terms of laying foundations for structural transformation in general and preparing for industrialization in particular was encouraging. Deepening structural change where manufacturing industries dominate the employment, consumption, and export were proven to have required more effort in capacity building of institutions and technological readiness. The GTP II which covers the period between 2015/16 and 2019/20 is meant to pursue the strategy of industrialization by deepening structural change based on lessons learnt during the implementation of GTP I.

The purpose of this paper is to analyze Ethiopia's development planning experience and critically assess the performance so far and review the role of the state in the process. It also aims at presenting and reflecting on the country's strategy on the development of the manufacturing industry as a showcase of efforts towards industrialization by the country. It assesses the challenges faced by the Ethiopian manufacturing industry and the strategies set out by the government thereof to tackle the challenges as discussed in the GTP II.



# 2

## National Plan for Emergence in Ethiopia



## 2.1. The Plans

Planning in Ethiopia started in 1945 when the 10-year program for industrial development was elaborated during the Imperial regime. A more formal planning started in 1956/57 when the First Five-Year Development plan of the Imperial Ethiopian Government was launched. There were three five-year development plans between 1956/57 and 1973/74.

The first five – year development plan focused on goals of resource mobilization, infrastructure development, and human capital formation (primarily education). The selection of the priority sectors signals that the objective of the plan was to lay foundations that serve as bases for further take – off.

The second five – year development plan which was launched in 1963 was a prelude to a 20 years development plan which targeted doubling income in 20 years then by 1983. The major sectors of priority were what had been identified as most propulsive sectors such as mining, manufacturing, and power. Agriculture remained the leading economic sector of importance by virtue of its large share in the GDP and employment in spite of its modest growth. At the center of the plan was the rationale that industry should help agriculture grow fast and thus priority was given to agro-processing industries. Service sectors were targeted to grow slower but fast enough to lubricate industry.

The second five – year development plan was a success. The monetized sector (mostly non-agrarian) increased from 46 per cent to 55 per cent growing four times as fast as the non-monetized sector for the period 1962/63 to 1966/67. This was due to fast growth in manufacturing, construction, and power. Value added in the manufacturing sector grew at an annual rate of 16 percent inducing the industry sector to grow at a rate of 12.5 per cent. As a result, the share of the industry sector increased from 9 per cent to 13 per cent over the five years plan period.

In the years ahead, it was difficult to sustain the high growth without a substantial change in the agriculture sector as the monetized sector covered only 5 million out of the 20 million people [Imperial Government of Ethiopia,

The Third Five Year Development Plan, 1961]. Demand and agricultural surplus for the monetized sector were crucial. The Third Five Year Development Plan (1967/68 – 1972/73) identified agriculture as a priority sector with a target of 5.7 per cent annual average growth in the production of commercial agriculture and a 1.8 per cent growth of output in the subsistence agriculture. To meet this goal and to ensure balanced regional development, large scale farming projects were established over major agro-ecological zones of the country. Growth in other sectors was expected to be fueled by the growth in the agricultural sector where industry, and transport and communication were expected to expand at 11 per cent each so that the overall GDP would grow at 6 per cent. This was equivalent to a per capita income growth of 3.5 per cent.

These three consecutive development plans are merited for laying the foundation of building a modern economy in Ethiopia. In the absence of private entrepreneurial capability in the manufacturing sector (the private sector was rather investing in the construction and housing sector), government intervention in direct public investment in the strategically important manufacturing sector during the second five- year plan period are still operating in the country. The most noticeable regions for their surplus agricultural production today such as Chilalo in Arsi are the result of the Third Five- Year Development Plan that supported intervention in the agricultural sector including the Chilalo Agricultural Development Unit (CADU).

While the plans focused on building long term capabilities, the system left the subsistent rural sector to either gradually succumb to modernization or live with the vagaries of nature by its own. In particular, the land system based on the tenancy of the majority rural poor while land was owned by the few feudal lords and the Church was not sustainable. While the regime was showing reluctance to embark on reforms despite resentment among the masses, the emergence of socialism and the tragic shock of the famous Ethiopian famine of 1973 gave the elite youth the courage to depose the Imperial regime.

Planning was a priority and common approach under the socialist regime (also known as the Dergue regime) that

spanned the period between 1973/74 and 1990/91. The most renowned plan during the Dergue was the Ten-Year Development Plan which was launched in 1984/85. Overall, actions of chaotic collectivization and villagization against basic economic principles of “self-interest with virtue” and the three decade’s long civil war led the country down to the worst quagmire of poverty as per capita income declined at an average rate of 1.4 per cent per annum over the 17 years reign of Socialism.

The incumbent EPRDF government took power in 1990/91. Patterns of Ethiopia’s socio-economic performance over the last twenty five years since 1991 can be broadly categorized into three episodes. The time spanning 1990/91 through 2004/05 was a period of recovery from economic woes aggravated by civil war under the socialist regime. The period between 2004/5 and 2009/10 was characterized by an economic expansion with high growth primarily driven by public investment in major infrastructure, particularly in urban areas. The years from 2010/11 to the present (2015/16) have focused on laying the foundation for structural transformation.

Over the period between 1994/95 and 2014/15, four development plans had been launched under a generic strategy called *Agriculture Development – Led Industrialization policy (ADLI)*. The rationale of ADLI when it was launched in 1994/95 was based on the fact that the livelihood of 85 per cent of the population was dependent on subsistence agriculture, and Agriculture accounted for more than 50 per cent of the GDP. Any development agenda in the country was thus expected to first address the issue of food self-sufficiency and food security before making the agricultural sector a source of surplus for industrial development. From the perspective of comparative advantage in the 1990s, Ethiopia was relatively endowed with land and rural labor force. Technically, the nation had less capital to launch an outright industrial policy. Under ADLI, rural extension programs, road infrastructure and education were the major priority areas which attracted significant share of the government budget [EPRDF, 1995].

### **i) The Sustainable Development and Poverty Reduction Program (SDPRP)**

The first formal development plan elaborated under ADLI was the *Sustainable Development and Poverty Reduction Program (SDPRP)* which was launched in 2002/03 though features of the plan were circulated as early as 2001. Agriculture, education, and infrastructure development were the major priority areas of SDPRP. These were similar to the priority sectors of the first five – year development plan under the Imperial regime. A concept of balancing the agriculture sector from the supply side and the urban development from the demand side (*memegageb*) was raised even though this was not reflected much during the implementation of the plan. The 5.9 per cent growth in

GDP (3.1 per cent growth in per capita GDP) during SDPRP could be seen as an improvement to the dismal performance over the preceding 10 years as GDP was growing at a snail’s pace of 2.3 per cent per annum falling short of the population growth rate of 2.9 per cent. Nevertheless, the 3.1 per cent per capita income growth for a nation with a per capita income of USD 120 was too slow to lift many people out of the quagmire of poverty.

### **ii) Plan for Accelerated and Sustained Development to End Poverty (PASDEP)**

The year 2004/05 witnessed episode political turning point as the ruling party had been challenged by the coalition of opposition groups in the highly contested election. The ruling party EPRDF conceded defeat to the opposition in almost all major towns. Still the ruling party claimed victory based on support from the rural vote. The ruling party came up with the second formal five- year development plan known as *Plan for Accelerated and Sustained Development to End Poverty (PASDEP)*, the plan was put in place in 2006. New areas of focus in addition to the priority areas which are carried over from the SDPRP included urban development, industrial development, commercialization of agriculture, and millennium development goals (MDGs). Unlike the previous plan, a double digit growth was envisaged over the period of PASDEP [MOFED, 2006]. The strategies under PASDEP were a means of redressing the apparent neglect to the urban sector (the demand side) while giving more attention to rural development.

The aggressive public investment in social and economic infrastructure such as roads, dams, universities, and condominium housing coupled with substantial private investment in the construction subsector created demand. A rise in food prices following the increase in demand in the modern sector and the relatively stable weather conditions led to an increase in the crop production by smallholder agricultural units. As a result, real GDP grew at an average rate of 11 per cent over the five year plan period. The service and agriculture sectors accounted for 55 per cent, and 36.6 per cent, respectively, of the total growth in GDP during PASDEP. The industry sector had only a 9 per cent share in the growth of GDP.

### **iii) The Growth and Transformation Plan (GTP): Prelude to Emergence**

In spite of the high growth and the expectations of economic take-off, sustainability of the high growth observed during the period of PASDEP was challenged by the record high inflation. This was not typically unexpected as the high growth observed was essentially demand-driven. Public investment in infrastructure was accompanied by expansionary trends in money supply. Sustainability

**Table 1:** Major investment projects of the GTP

	Millions of USD	Share in Percent
<b>Industry</b>	<b>11,386</b>	<b>34.0</b>
Sugar	4,446	12.9
Chemical, pharmaceutical, cement	2,035	6.1
Metal engineering industry	1,204	3.6
Textile	938	2.8
Fertilizer complex industry	777	2.3
<b>Energy</b>	<b>10,455</b>	<b>31.2</b>
<b>Transport</b>	<b>9,512</b>	<b>28.4</b>
Railway	6,517	19.5
<b>Telecommunication</b>	<b>1,275</b>	<b>3.8</b>
<b>Addis Ababa housing project</b>	<b>880</b>	<b>2.6</b>
<b>Total</b>	<b>33,508</b>	<b>100</b>

Source: MoFED, GTP (2010)

in growth required an equivalent response from the supply side. Accumulations made during the PASDEP period needed to pay in the form of rise in productivity in the vibrant sectors. In particular, structural change was necessary in that economic activities shift from sectors of low productivity to sectors of high productivity. This led to the conception of the idea of structural transformation. By 2010/11, the Ethiopian government floated a five-year development plan entitled - *Growth and Transformation Plan (GTP)*.

GTP in many ways marked the formal starting point towards the notion of emergence in Ethiopia. It set the ambitious goal of Ethiopia becoming a middle-income country by 2025. It identified strategies foundational pillars for structural transformation. The Ethiopian government for the first time set out a plan to invest in key strategic industries such as fertilizer, sugar, textile, and metallurgy. Such investments required a minimum level of infrastructural capability which Ethiopia barely had. Thus, the plan also embarked on massive investment outlays on key infrastructure such as energy, road transport, railway transport, and telecommunication.

The decision to invest heavily in the energy sector has multipronged purpose. Primarily, it solves a major bottleneck in the industrialization process of the country by increasing the current supply of electric energy from about 2,000 MW to 10,000 MW per annum. Secondly, the fact that such energy is mainly generated by hydroelectric power, it fits well into the country's ambition of leading a green economy. Thirdly, it is a showcase on how developing countries can harness their natural resources relying on their own capacity in the absence of international support for financing. The Great Ethiopian Renaissance Dam (GERD) which is expected to generate 6,000 MW electricity upon completion is being constructed on the Blue Nile. Geopolitical complications made it difficult to mobilize financ-

es internationally. The project is being financed through crowd-funding and from the government coffers. Fourthly, it promotes regional integration through intra-regional trading as a significant amount of the energy from GERD and Ghibe III (with an installed capacity of 1,870 MW) is for export to neighboring countries. Transmission lines have already been erected to connect some of the beneficiary countries.

The total investment cost of the projects off government budget was US\$33,508 million. About 54 per cent of the financial requirement of the projects being dispensed in foreign exchange.

In parallel with the off-budget projects, the government of Ethiopia allotted 70 per cent of the country's budget to poverty related projects. Education attracted the highest share of the total government budget (22.5 per cent). Emphasis was also given to education in previous plans in preparation for industrialization. The budget share of the education sector during the period of PASDEP (2005/06-2009/10) was still the highest at 21.7 per cent. Road follows with 21.8 per cent share in the total budget during GTP, up from the 14.6 per cent during PASDEP. Other important sectors that have been given priority during the plan period were agriculture and food security (12.2 per cent), clean water (7 per cent), and health (6.8 per cent).

In a nutshell, GTP in its first phase had three interrelated focus areas. The first is putting in place the necessary physical and human infrastructure; the second is triggering structural change and thus nurturing a culture of industrialization by kicking off the process through direct public investment in key strategic manufacturing industries; and the third is addressing poverty related issues so that ensuing growth is broad-based and capable of slashing poverty by a significant margin.

A combination of the above efforts coupled with incentivization of the private sector, under the framework of public-private-partnership, intended to result in a double-digit GDP growth and some degree of structural change within the economy. Real GDP was targeted to grow at an average rate of 11.2 per cent during GTP period. In particular, the industry sector was expected to drive the growth momentum where its contribution to growth would increase from 9.1 per cent during PASDEP to 25.5 per cent (about 2.9 percentage points of the targeted 11.2 per cent growth in GDP) during the GTP. Accordingly, the dynamic contributions of the agriculture and service sectors would decline, over the same period, from 37.7 per cent to 31 per cent, and from 53.2 per cent to 43.4 per cent, respectively. This was expected to increase the static share of the industry sector from 9.8 per cent (of GDP) in 2009/10 to 18.8 per cent thereby reducing the static contribution of the agriculture sector to the GDP by 8.3 percentage points [See Table 2].

An important and critical challenge to an ambitious development agenda such as this is the ability to mobilize adequate financial resources for development. GTP envisaged a 28.2 per cent rate of gross capital formation by 2014/15 from its base rate of rate of 22.3 per cent in 2009/10. The 9.5 per cent rate of gross domestic saving observed in 2009/10 was by far lower than the targeted rate of gross fixed investment. An important component of the plan was domestic resource mobilization by reducing tax evasion, social mobilization on saving such as the Great Renaissance Dam bond and the introduction of the saving scheme of the urban condominium housing project. As a result, the rate of gross domestic saving surpassed the target to reach at 21.8 per cent by the end of the plan period (2014/15). This was paralleled by an increase in the rate of gross fixed investment above the target. The rate of gross fixed investment in 2014/15 was 39.3 per cent, an 11.2 percentage point increase over the target. As a result, the resource gap remained at 17.5 per cent above the targeted level of 13.1 per cent.

**Table 2:** Major Macroeconomic Targets of the GTP – I (2009/10-14/15)

<b>Growth (per cent)</b>						
	<b>Baseline (2005/06-09/10)</b>		<b>Target (2010/11-14/15)</b>		<b>Performance (2010/11-14/15)</b>	
GDP	10.4		11.2		10	
Agriculture	7.6		8.6		6.6	
Industry	13		20		20	
Service	10.6		10.6		10.7	
<b>Structure of the Economy: static share (per cent)</b>						
	<b>Baseline</b>		<b>Target</b>		<b>Performance</b>	
	<b>2005/06-09/10</b>	<b>2009/10</b>	<b>2010/11-14/15</b>	<b>2014/15</b>	<b>2010/11-14/15</b>	<b>2014/15</b>
Agriculture	47.9	45.2	38.8	36.9	41.5	38.5
Industry	9.7	9.8	15.6	18.8	12.7	15.1
Service	42.4	45.0	45.6	44.3	45.8	46.4
<b>Structure of the Economy: dynamic share (per cent)</b>						
	<b>Baseline (2005/06-09/10)</b>		<b>Target (2010/11-14/15)</b>		<b>Performance (2010/11-14/15)</b>	
Agriculture	37.7		31.0		28.1	
Industry	9.1		25.5		23.3	
Service	53.2		43.4		48.5	
<b>Accumulations and foreign trade</b>						
	<b>Baseline (2009/10)</b>		<b>Target (2014/15)</b>		<b>Performance (2014/15)</b>	
Gross domestic saving	5.5		15		21.8	
Gross capital formation	22.3		28.2		39.3	
Resource balance	-19.3		-13.1		-17.5	
Exports	13.6		22.5		9.8	
Imports	33.0		35.7		27.3	

Source: Author's calculations based on data from National Planning Commission

Given the fact that about 54 per cent of the resource requirement of the plan was in foreign exchange, the export sector was expected to play a major role in generating foreign exchange to finance these development projects. The envisaged level of structural change was also associated with diversification of exports from primary commodities to manufacturing goods, mainly output of agro-processing industries. To this end, export of goods and non-factor services as per cent of GDP were targeted to reach 22.5 per cent in 2014/15 from 13.6 per cent in 2009/10. A modest expansion of imports by only 2.7 percentage points from its base of 33 per cent was meant to reduce pressure on the balance of payment. Nevertheless, the export sector did not perform as expected. The value of total exports stood at only 9.8 per cent of GDP by the end of the plan period (2014/15). The two major reasons for the weak performance in the export sector includes (i) the commodity price shock in the global market and (ii) the delay of industrial projects which were planned to produce commodities such as textile and sugar for export.

#### iv) The Second Phase of the Growth and Transformation Plan (GTP – II) (2015/16-2019/20)

The second phase of the growth and transformation plan (GTP – II) under implementation since 2015/16 is a continuation of GTP – I. The main departure of the current plan from GTP – I lies in the fact that it gives emphasis to a wide range of developmental issues, including boosting the manufacturing sector, increasing efficiency, productivity, quality, and competitiveness in the manufacturing and agriculture sectors, macroeconomic stability, overall institutional capacity in the construction sector, sustainable urban development, domestic private sector transformation, harnessing human capital towards quality, and building a climate resilient green economy.

Key objectives of the plan include:

- Registering an average economic growth of 11 percent over the plan period,
- Deepening structural change by increasing engineering and fabrication capacity, productivity, quality, and competitiveness,
- Ensuring the organized participation, ownership, and inclusiveness of the people in the development process, and

- Deepening the hegemony of developmental political economy through democratic developmental state.

The plan has identified four core elements of structural transformation as major macro-economic goals, amongst them:

- An average economic growth of 11 per cent at base case scenario and 12.2 per cent at high growth scenario;
- Structural change;
- Maintaining a single digit rate of inflation;
- Ensuring stable and competitive foreign exchange rate; and
- High rates of accumulation – a 29.6 percent rate of gross domestic saving and a 41.3 per cent rate of gross fixed investment by 2019/20.

The high growth momentum observed during the periods of PASDEP and GTP I is also projected to continue during the second phase of the GTP. Registering high economic growth to the tune of 11 per cent, intensifying structural change, maintaining macroeconomic stability, and increasing rates of accumulations are the core macroeconomic goals of GTP – II.

Gross domestic saving is projected to reach 29.6 per cent of GDP by the end of the plan period to finance ambitious investment outlay which is planned to stand at 41.3 per cent of GDP. A successful implementation of the plan, in this regard, would reduce the nation's dependency on foreign resources from 17.5 per cent in base year to 11.7 per cent in 2019/20.

Given the significant foreign exchange requirement of the plan, a targeted reduction in resource gap would imply redoubling of effort in promoting exports coupled with a moderate rise in imports. Exports are planned to rise from 9.8 per cent of GDP in 2014/15 to 20.6 per cent by the end of the plan period. Import bills are projected to rise by a margin of 5 percentage points of GDP over the five -year plan period.

Cognizant of the weak export performance during the first phase of GTP, GTP II emphasized a strategy of both increasing the volume of traditional exports and diversifying the structure of exports towards promoting electricity generation and light manufacturing.

Overall, there are no major differences between the two phases of GTP in overall objectives and goals. The difference is yet to be seen in the details of implementation of GTP II. That requires institutional transformation – a point the government stresses as one of the key priority areas.



**Table 3:** Major Macroeconomic Targets of the GTP – II (2015/16-19/00)

<b>Growth (per cent)</b>				
	<b>Baseline (2005/06-09/10)</b>		<b>Target (2010/11-14/15)</b>	
GDP	10.0		11.0	
Agriculture	6.6		8.0	
Industry	20.0		20	
Manufacturing	14.7		21.9	
Service	10.7		10.0	
<b>Structure of the Economy: static share (per cent)</b>				
	<b>Baseline</b>		<b>Target</b>	
	<b>2010/11-14/15</b>	<b>2014/15</b>	<b>2015/16-19/00</b>	<b>2019/00</b>
Agriculture	41.5	38.5	35.4	33.5
Industry	12.7	15.1	19.4	22.3
Manufacturing	4.3	4.8	6.3	8.0
Service	45.8	46.4	45.1	44.3
<b>Structure of the Economy: dynamic share (per cent)</b>				
	<b>Baseline (2010/11-14/15)</b>		<b>Target (2015/16-19/20)</b>	
Agriculture	28.1		25.2	
Industry	23.3		34.6	
Manufacturing	5.7		12.2	
Service	48.5		40.2	
<b>Accumulations and foreign trade</b>				
	<b>Baseline (2014/15)</b>		<b>Target (2019/20)</b>	
Gross domestic saving	21.8		29.6	
Gross capital formation	39.3		41.3	
Resource balance	-17.5		-11.7	
Exports	9.8		20.6	
Imports	27.3		32.3	

Source: Author's calculations based on data from National Planning Commission

**Table 4:** Major export targets (as per cent of GDP)

	<b>Base year estimates</b>	<b>Targets</b>				
	<b>2014/15</b>	<b>2015/16</b>	<b>2016/17</b>	<b>2017/18</b>	<b>2018/19</b>	<b>2019/20</b>
<b>Export of Goods</b>	<b>4.9</b>	<b>7.0</b>	<b>8.5</b>	<b>9.7</b>	<b>10.7</b>	<b>11.8</b>
<b>Agriculture</b>	<b>3.6</b>	<b>4.7</b>	<b>5.3</b>	<b>5.8</b>	<b>6.1</b>	<b>6.5</b>
Traditional exports	3.2	4.1	4.7	5.0	5.3	5.5
Flower	0.3	0.4	0.4	0.5	0.6	0.6
Others	0.1	0.2	0.2	0.5	0.3	0.4
<b>Industry</b>	<b>0.7</b>	<b>1.4</b>	<b>2.3</b>	<b>2.6</b>	<b>3.0</b>	<b>3.6</b>
<b>Manufacturing</b>	<b>0.6</b>	<b>1.2</b>	<b>1.6</b>	<b>2.0</b>	<b>2.5</b>	<b>3.0</b>
<b>Electricity</b>	<b>0.1</b>	<b>0.2</b>	<b>0.7</b>	<b>0.6</b>	<b>0.6</b>	<b>0.5</b>
Minerals	0.6	0.9	0.9	1.3	1.5	1.7

Source: Second Phase of the Growth and Transformation Plan, National Planning Commission, 2016.



## 2.2. Growth Performance and Structural Change Under PASDEP and GTP I

The high rate of investment in infrastructure, the favorable weather conditions in the agricultural sector, and the commencement of production by industrial firms resulted in an average GDP growth of 10 per cent over the five-year period of GTP. With a 2.6 per cent annual average growth rate of population, this translates into a per capita GDP of 7.4 per cent.

The high growth episodes that had been observed during PASDEP and GTP (2009/10 – 2014/15) were robust enough to reduce poverty. Growth rates over the preceding 15 years were at best recovery from the deteriorating living standard the nation had been witnessing under the 17-year military rule that lasted in 1991. The proportion of population below poverty line declined from 38.7 per cent in 2004/05 to 29.6 per cent in 2010/11.

### a) Sources of Growth

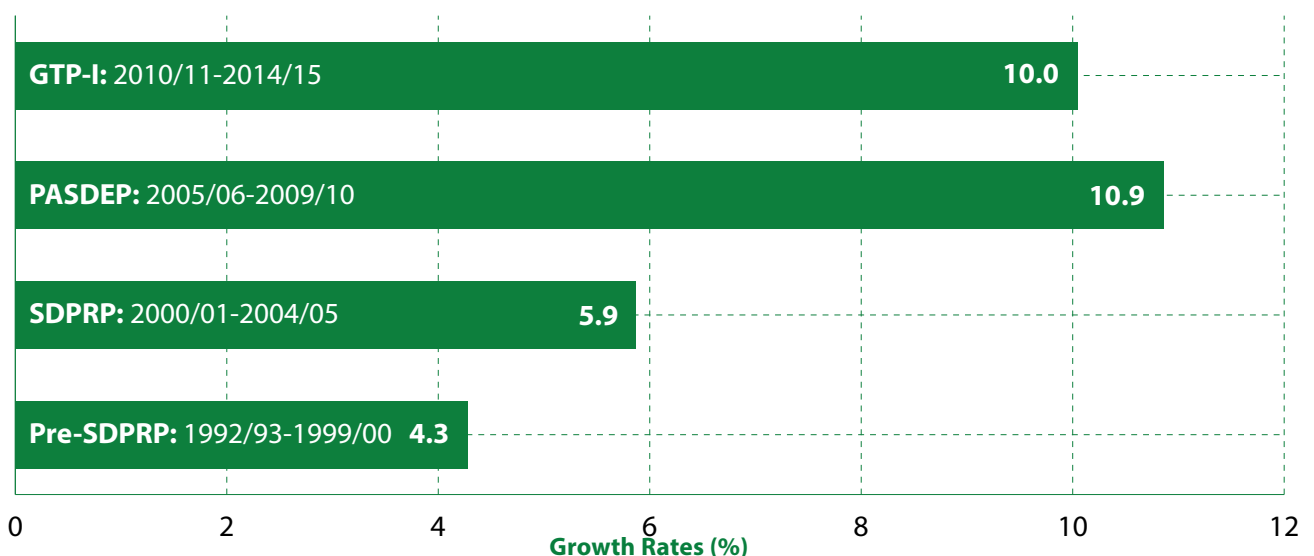
During the period of PASDEP, the contributions of labor, capital, and total factor productivity (TFP) were, 2.8 per cent, 3.4 per cent, and 4.7 per cent, respectively, in the 10.9

per cent growth in GDP. That means, TFP accounted for 43 per cent of the total growth. Growth in the first phase of GTP was largely explained by expansion in capital. Labor, capital, and TFP had a respective share of 26 per cent (2.6 percentage points), 48 per cent (4.8 percentage points), and 27 per cent (2.7 percentage points).

It may be tempting to interpret the seemingly high TFP particularly during PASDEP as an indicator of possible overestimation in growth. Nevertheless, TFP after all is a measure of many factors which are not necessarily associated with technological change. In the Ethiopian case, there was very low rate of capacity utilization in the manufacturing sector for long time before the introduction of PASDEP. More importantly, the agricultural sector was hit by frequent drought. Improvement in the capacity utilization, incidence of favorable weather conditions for a relatively longer period of time, and improved adaptation strategies towards volatile climatic conditions among agricultural households improve factor productivity.

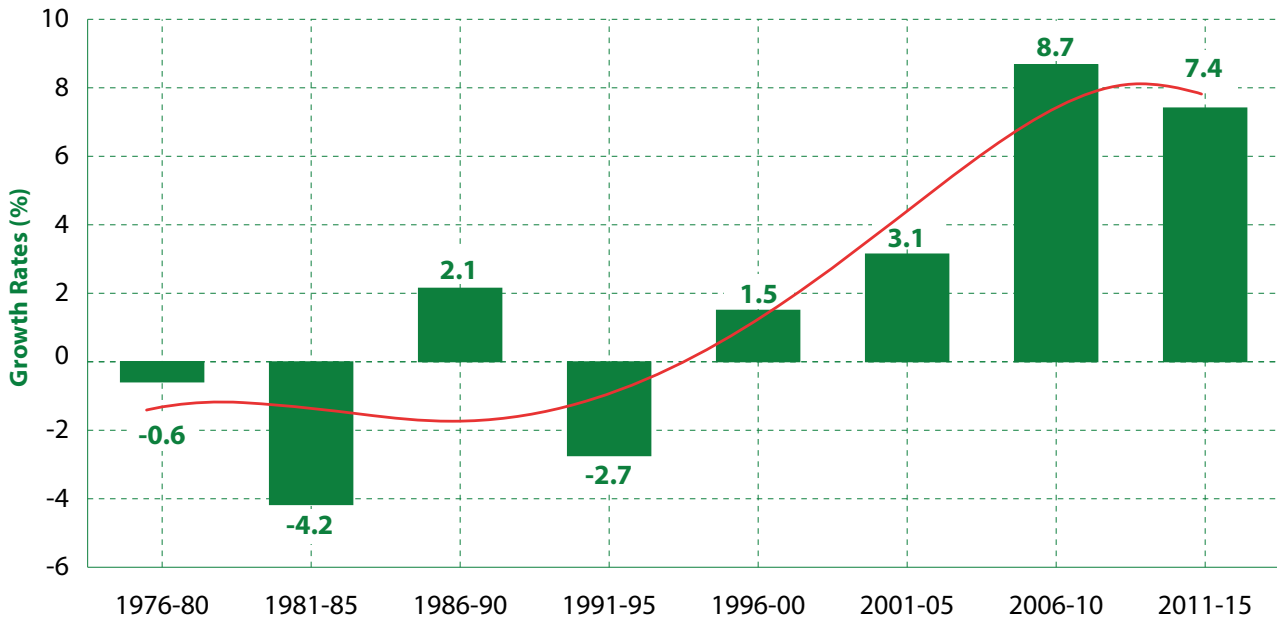
As it is apparent in Figure 5, the cyclical component of the per capita GDP had been volatile until 2004/05. Most of the deep cycles were explained by droughts. For instance,

**Figure 2:** Growth in GDP by plan period



Source: Author's calculations based on data from the National Planning Commission.

**Figure 3:** Trends in average per capita GDP growth (per cent)



Source: Author's computations using data from National Planning Commission.

two of the deepest recessions are associated with the severe droughts which occurred in 1984/85 and 2002/03. Since 2004/05, there has been a stable cycle partly due to

the favorable weather conditions. This explanation can be supported by the systematic relationship between the cyclical component of per capita GDP and mean annual rainfall.

## Decomposing Growth by Factors of Production

BOX 1

The growth accounting exercise is based on Solow's decomposition of growth into labor, capital, and total factor productivity (TFP). The aggregate production function follows the Cobb-Douglas technology with constant returns to scale relating output  $Y$  to labor  $L$  and capital,  $K$ :

$$Y_t = A_t L_t^\alpha K_t^{1-\alpha}$$

Where  $\alpha$  is output elasticity of labor so that  $1-\alpha$  becomes output elasticity of capital, and  $A_t$  is a parameter representing other factors such as technology.

Taking the logarithm of both sides of the equation and differentiating with respect to time gives:

$$\frac{\left(\frac{dY_t}{Y_t}\right)}{dt} = \frac{\left(\frac{dA_t}{A_t}\right)}{dt} + \alpha \frac{\left(\frac{dL_t}{L_t}\right)}{dt} + (1-\alpha) \frac{\left(\frac{dK_t}{K_t}\right)}{dt}$$

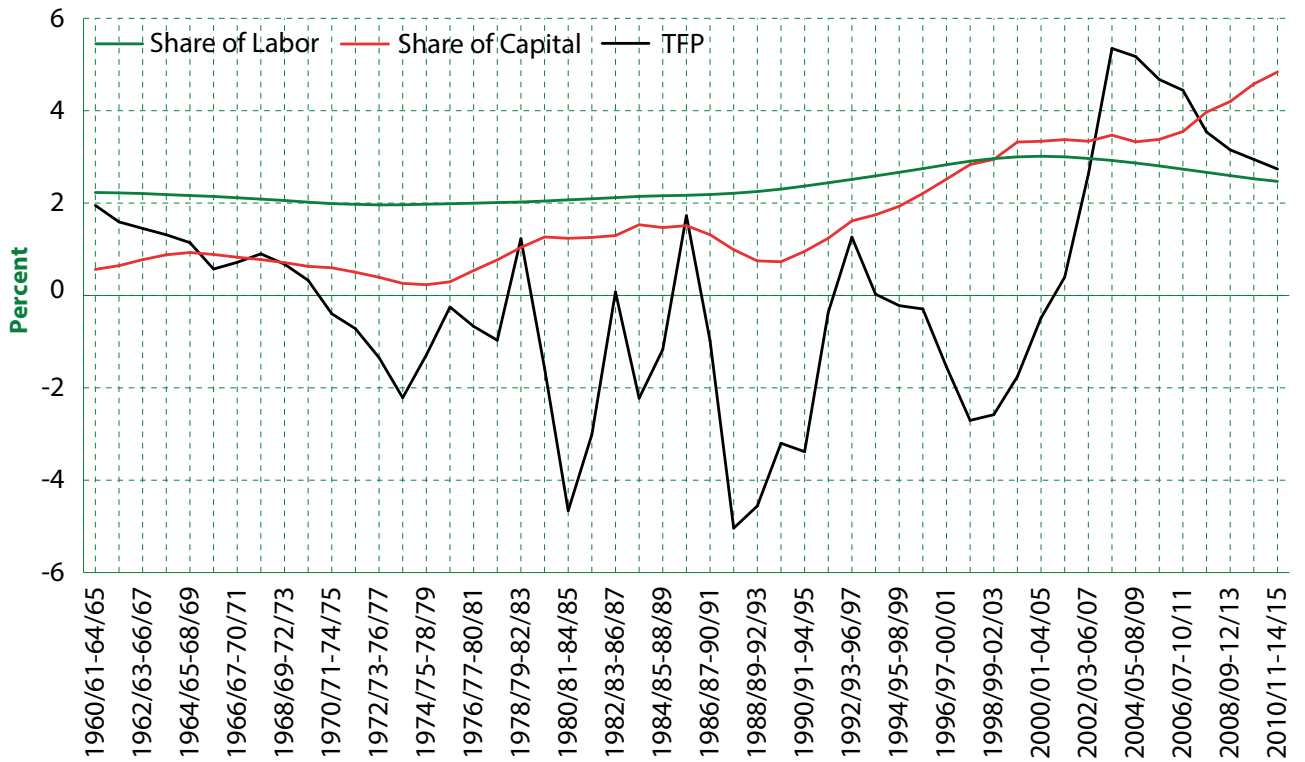
This can be rewritten in an equivalent notation as:

$$\frac{\dot{Y}_t}{Y_t} = \frac{\dot{A}_t}{A_t} + \alpha \frac{\dot{L}_t}{L_t} + (1-\alpha) \frac{\dot{K}_t}{K_t}$$

Where  $\frac{\dot{Y}_t}{Y_t}$  = growth in output,  $\frac{\dot{L}_t}{L_t}$  = growth rate in labor,  $\frac{\dot{K}_t}{K_t}$  = growth in capital, and  $\frac{\dot{A}_t}{A_t}$  = residual or TFP.

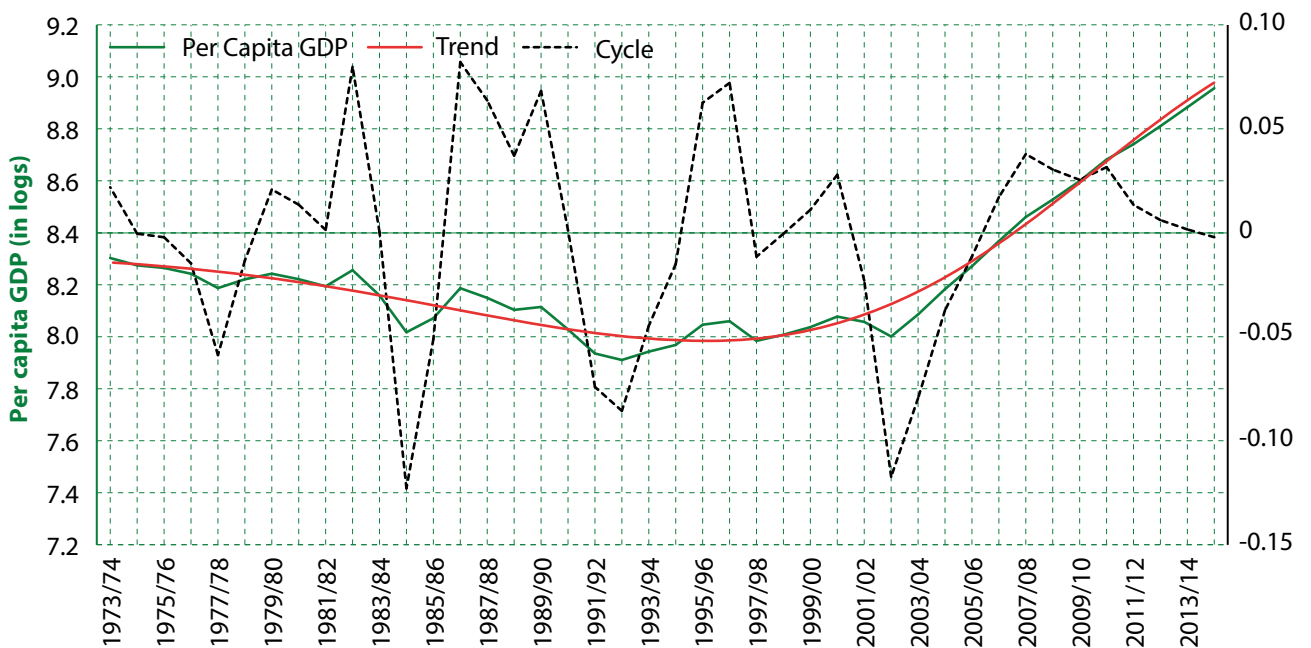
Traditionally,  $\alpha = 2/3$  so that  $1-\alpha = 1/3$ .

**Figure 4:** Trends in the factor contribution to growth (five year moving average of percentage points)

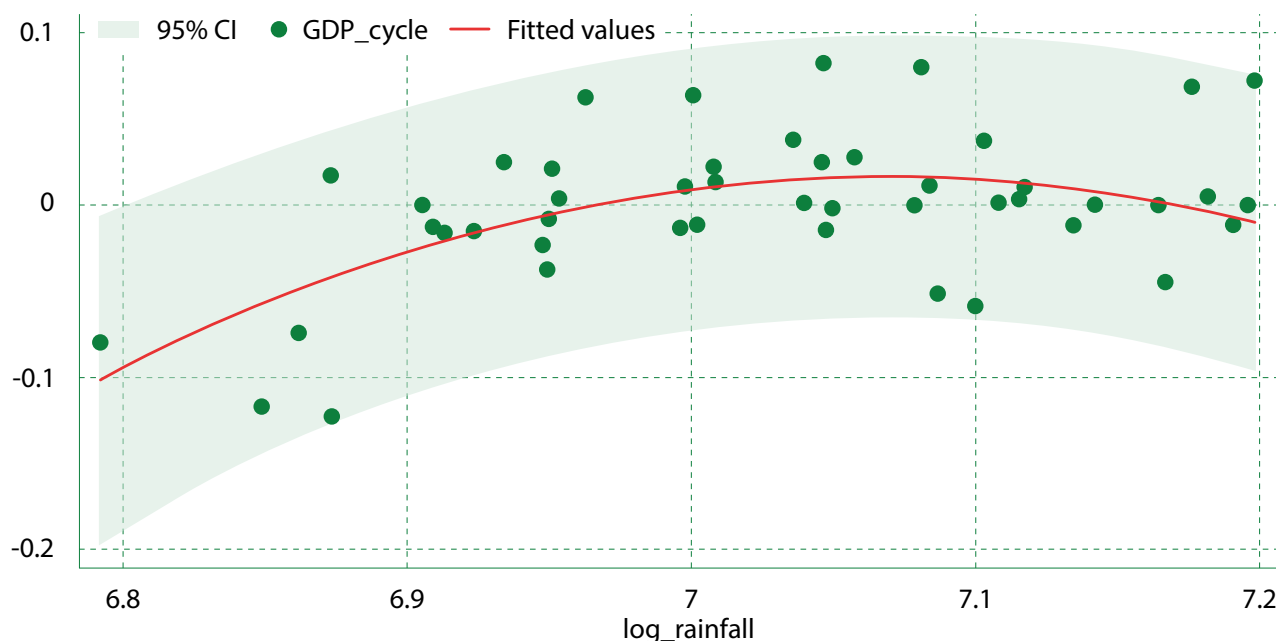


Source: Author's computations using data from the Planning Commission

**Figure 5:** Patterns of the long-run and short run components of per capita GDP



Source: Author's computations using data from National Planning Commission

**Figure 6:** The association between cyclical component of per capita GDP and rainfall

Source: Authors computations using data from the Planning Commission and Ethiopian Meteorological Agency

Figure 6 depicts a quadratic relationship between the cyclical components of per capita GDP and mean annual rainfall lending a hint that both drought and excessive rainfall had an adverse impact on the Ethiopian economy. Further investigation reveals that most bumper harvests in the country were associated with the long-run average of mean annual rainfall while deviations from the long-run average tend to be associated with average to shortfalls in agricultural productions. In fact, one of the major qualities of structural transformation is to build agricultural capabilities that cannot be severely tested by intermittent climatic shocks.

In the first phase of GTP, the share of capital was significant. An increase in the rate of fixed capital formation from 22.3 per cent in 2009/10 to 39.3 per cent in 2014/15 has been translated into a fast rate of expansion in the capital stock. Infrastructure in the form of roads, railways, dams, universities (from 2 in 1990s to 35 public universities in around 2013), condominium housing projects, and other investment projects in the productive sectors have generated growth. Capital – labor ratio has been rising fast since 2005/06. A rise in capital – output ratio has also been observed during GTP – I indicating that capital deepening is occurring.

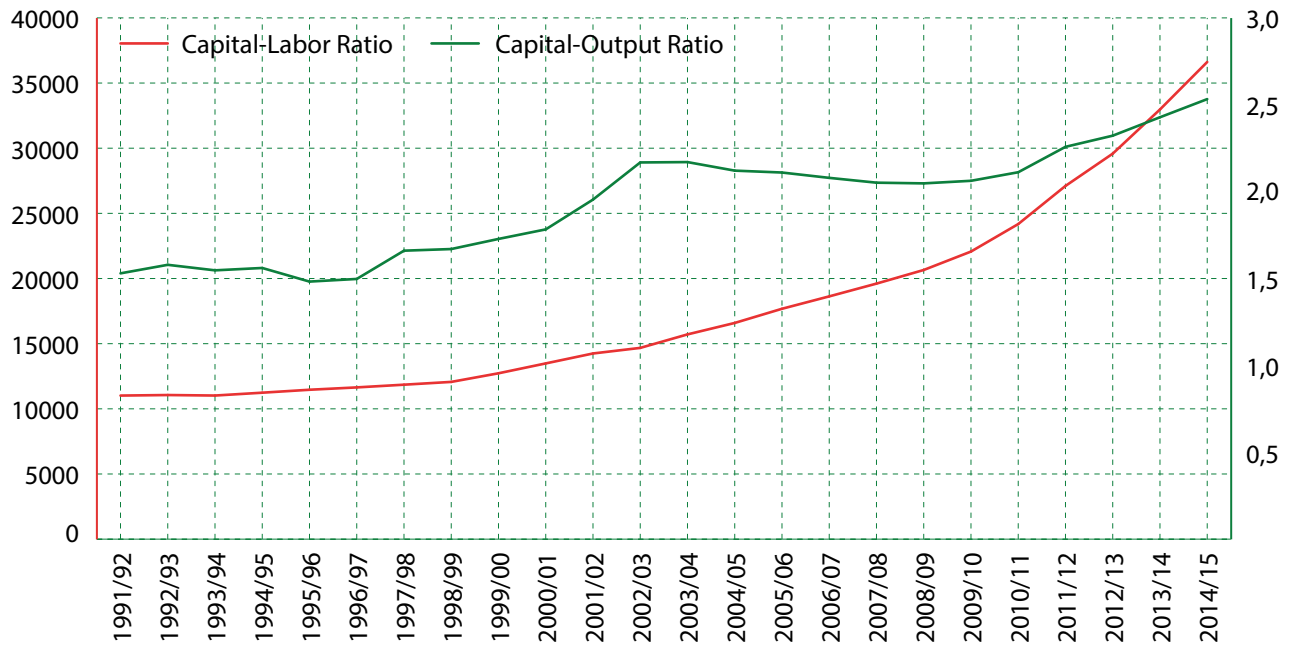
### b) Sector Contribution to Growth

An important feature that was observed during the period of GTP – I over PASDEP is that the contribution of the agricultural sector to growth tended to decline while that of the industrial sector showed an upward trend. The dynamic share of the agriculture sector during GTP – I averaged

27.2 per cent in sharp contrast to its share of 49.2 per cent during the period of SDPRP (2002/03–2004/05) and 36.6 per cent during PASDEP. The contribution of the industrial sector to growth rose from 9 per cent during PASDEP to 25.4 per cent over the period of GTP [See Figure 8.]

Empirical evidence shows, the dynamic contribution of the service sector is most of the time higher than the contribution of other sectors in many countries [Syrquin, 1988]. However, whether the high share of the service sector in the GDP growth is a sign of an undergoing structural transformation depends on the nature of goods and services the sector is transacting. In the case of Ethiopia, the service sector is facilitating the transaction of localized agricultural commodities and imported items. Transformation in the service sector is yet to be witnessed when the sector is integrated in the global value chain in a manner that is being demonstrated by the Ethiopian Airlines.

It might be tempting to interpret the rise of the dynamic contribution of the industry sector as a sign of some degree of structural change and a transition to industrialization. Nevertheless, a significant component of the rise in the share of the industry sector in the GDP growth was accounted by the construction subsector. Out of the 25.4 per cent share of the industry sector in the overall growth of GDP, 17.7 per cent was the share of the construction subsector. That means, 68.5 per cent of the fast growth in the value added of the industrial sector was accounted by the construction subsector. Conversely, the manufacturing sector had only 6 per cent contribution to GDP growth [See Figure 9].

**Figure 7:** Signs of capital deepening: rising capital – labor ratio and capital – output ratio

Source: Author's computations using data from National Planning Commission

## Decomposition of Growth by Sector (Supply Side)

BOX 2

Dynamic contribution of sectors to growth is the share of each sector in the average growth rate of GDP over some period. It combines the growth dynamics of each sector and its share in the GDP. GDP by definition is the sum of the value added of the various sectors:

$$GDP \equiv Y = \sum_{i=1}^n v_i$$

where  $v_i$  = value-added in the  $i^{\text{th}}$  subsector. Growth in GDP is given by:

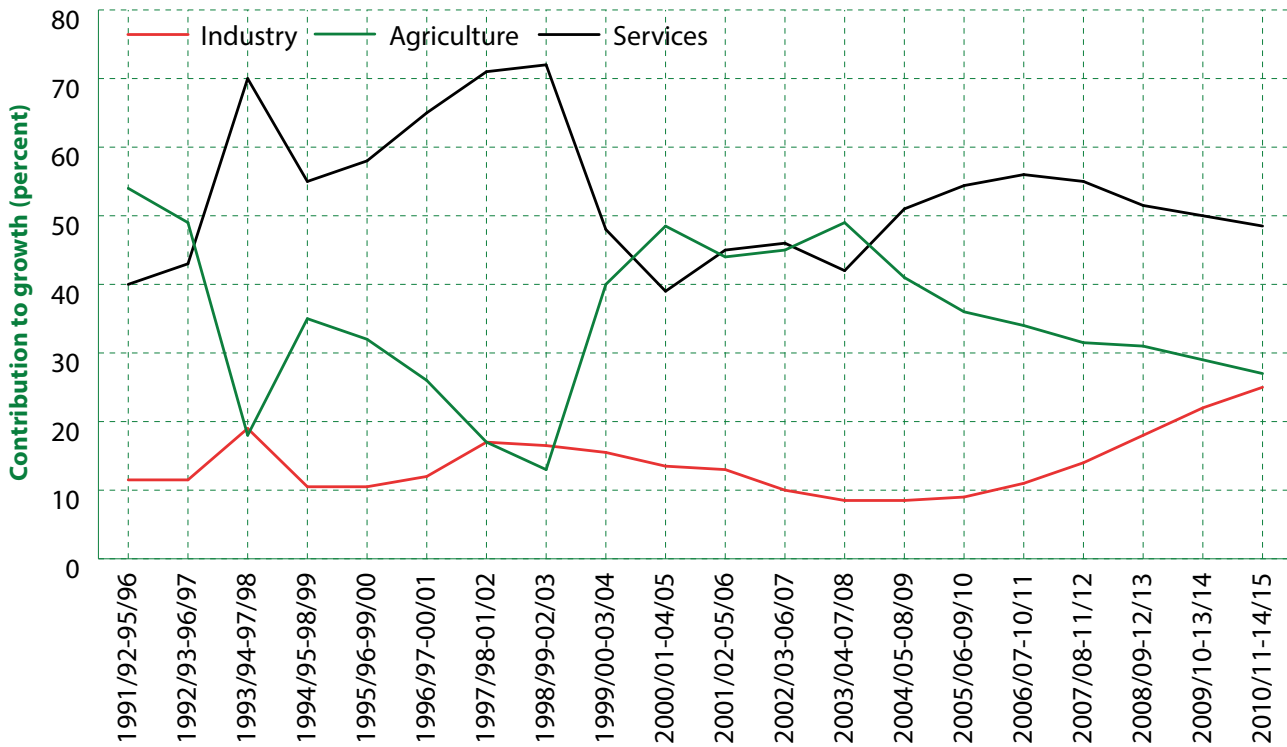
$$g = \frac{\sum_{i=1}^n \Delta v_i}{Y}$$

Multiplying every  $v_i$  by  $v_i/v_i$  gives

$$g = \sum_{i=1}^n \left( \frac{\Delta v_i}{v_i} \right) \frac{v_i}{Y} = \sum_{i=1}^n g_i s_i = \sum_{i=1}^n g_i^m$$

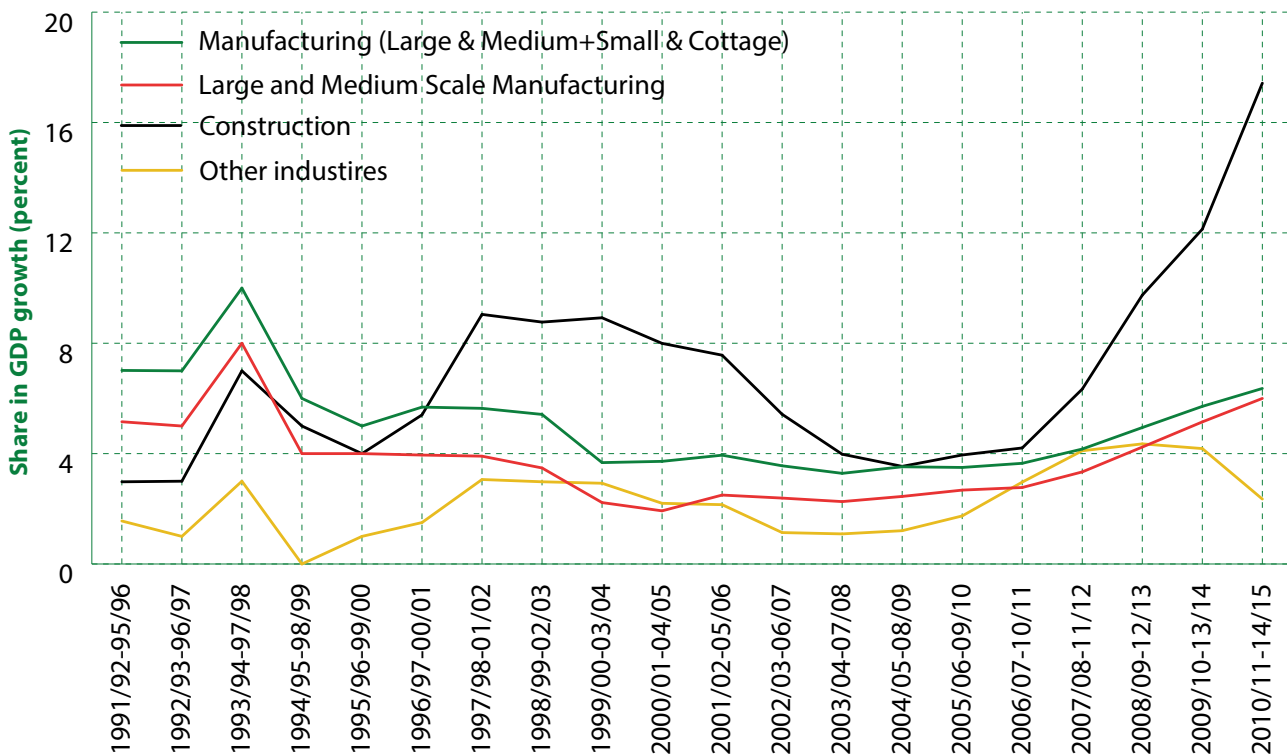
Where  $g_i = \frac{\Delta v_i}{v_i}$  is growth in the value-added of the  $i^{\text{th}}$  sector, and  $s_i = \frac{v_i}{Y}$  is the share of the  $i^{\text{th}}$  sector in the GDP. For this exercise, five-year moving average of the contributions of sectors and subsectors to growth for the period 1991/92-2014/15 are used. [See also EEA, 2015].

**Figure 8:** Dynamic contribution of sectors to GDP



Source: Author's computations using data from the National Planning Commission

**Figure 9:** Dynamic contribution of subsectors of the industry sector to GDP growth



Source: Author's computations based on data from the National Planning Commission.

## Decomposing Growth by Demand Components

BOX 3

Gross domestic product  $Y$  is the sum of expenditures on private consumption ( $C$ ), private investment ( $I$ ), government expenditure ( $G$ ), and export ( $X$ ) net of imports ( $M$ ). Expenditures  $C$ ,  $I$ , and  $G$  constitute domestic demand ( $D$ ) so that:

$$Y = D + X - M \quad (1)$$

$D$  in equation (1) is equivalent to the sum of domestically produced goods and services ( $Z$ ) plus imports ( $M$ ):

$$D = Z + M \quad (2)$$

Combining equations (1) and (2) yields:

$$Y = Z + X \quad (3)$$

Define  $\psi$  as a proportion of domestically produced goods in the domestic demand:

$$\psi = \frac{Z}{D} \Rightarrow Z = \psi D \quad (4)$$

And define  $\eta$  as a proportion of the country's export in the foreign demand,  $W$ :

$$(5)$$

Combining (3), (4) and (5):

$$Y = \psi D + \eta W \quad (6)$$

Differentiating (6) with respect to time,

$$\frac{dY}{dt} = \frac{d\psi}{dt} \cdot D + \frac{dD}{dt} \cdot \psi + \frac{d\eta}{dt} \cdot W + \frac{dW}{dt} \cdot \eta \quad (7)$$

Substituting  $Z/\psi$  for  $D$ ,  $X/\eta$  for  $W$ ,  $Z/D$  for  $\psi$ , and  $X/W$  for  $\eta$  and dividing through by  $Y$ :

$$\frac{\dot{Y}}{Y} = \frac{Z}{Y} \left[ \frac{\dot{D}}{D} + \frac{\dot{\psi}}{\psi} \right] + \frac{X}{Y} \left[ \frac{\dot{W}}{W} + \frac{\dot{\eta}}{\eta} \right] \quad (8)$$

Where  $\dot{Y} = \frac{dY}{dt}$ ,  $\dot{D} = \frac{dD}{dt}$ ,  $\dot{\psi} = \frac{d\psi}{dt}$ ,  $\dot{W} = \frac{dW}{dt}$ , and  $\dot{\eta} = \frac{d\eta}{dt}$ .

For discrete changes, equation (8) can be re-specified by adding interaction terms:

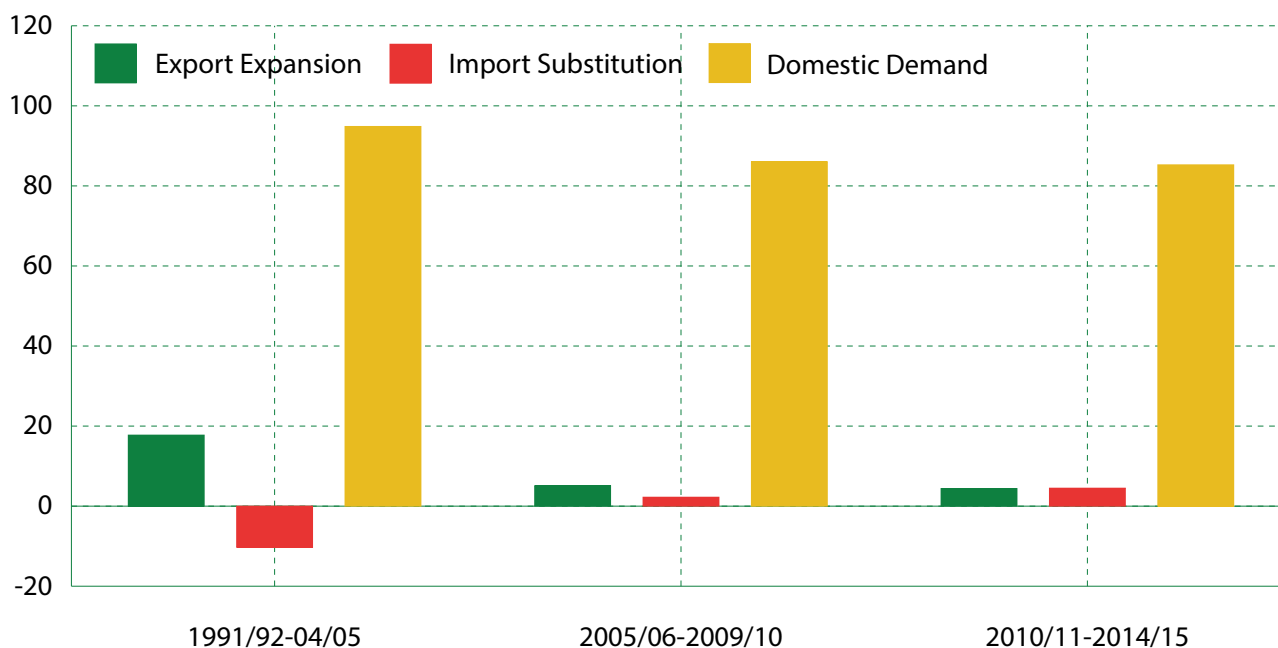
$$\frac{\Delta Y}{Y} = \frac{Z}{Y} \left[ \frac{\Delta D}{D} + \frac{\Delta \psi}{\psi} + \left( \frac{\Delta D}{D} \cdot \frac{\Delta \psi}{\psi} \right) \right] + \frac{X}{Y} \left[ \frac{\Delta W}{W} + \frac{\Delta \eta}{\eta} + \left( \frac{\Delta W}{W} \cdot \frac{\Delta \eta}{\eta} \right) \right] \quad (9)$$

Equations (8) and (9) decompose growth -  $\frac{\dot{Y}}{Y}$  or  $\frac{\Delta Y}{Y}$  - into change in domestic demand -  $\frac{Z}{Y} \left( \frac{\dot{D}}{D} \right)$  - import substitution -  $\frac{Z}{Y} \left( \frac{\dot{\psi}}{\psi} \right)$  - and export promotion  $\frac{X}{Y} \left( \frac{\dot{W}}{W} + \frac{\dot{\eta}}{\eta} \right)$  [See Chenery, 1960, for details of related specifications].

### c) The Demand Side Contribution to Growth

Expansion in domestic demand played a pivotal role in the high growth registered in Ethiopia both during PASDEP and GTP. Domestic demand has accounted for 85.3 per cent of the total growth in nominal GDP during GTP, only a 1 percentage point reduction compared to its contribution during PASDEP. The share of growth gains due

to import substitution was 4.5 per cent, an improvement over the 2.2 per cent share in the period of PASDEP. The weak performance of the export sector that was observed during the last years of GTP is reflected on the reduction of its contribution to growth compared to what it contributed over the period of PASDEP. The dynamic share of the export sector to GDP fell from 5.1 per cent during the PASDEP to 4.4 per cent over the period of GTP.

**Figure 10:** Demand side decomposition of growth

Source: Author's computations based on data from the National Planning Commission.

Further disaggregation reveals that a rise in private consumption was driving the growth during the period of PASDEP. The contribution of investment to growth began to rise during the period of PASDEP and continued its surge over the period of GTP as that of private consumption declined. This may indicate that there is a need to redirect investments in more productive sectors before dynamic inefficiency in the form of declining shares of private consumption sets in full force.

#### d) Accumulations

Saving mobilization has been one of the important economic achievements of the GTP. Rate of gross domestic saving reached 21.8 per cent in 2014/15. This is quite an achievement given the low level of saving registered in 2009/10, which was a mere 9.5 per cent. The resource balance did not, however, decline because the relatively higher rate of savings was paralleled by an increase in the rate of gross fixed investment. A significant portion of the 17.5 per cent resource gap was filled by net transfers from the rest of the world. Net transfer from the rest of the world was 9.4 per cent of GDP in the fiscal year 2014/15. A significant component of the private transfers is remittances from Ethiopian nationals abroad. [National Bank of Ethiopia, Annual Report, various issues].

The resource balance is a mirror image of the current account balance in the balance of payments. The 17.5 per cent current account deficit was a result of weak performance in the export sector even in the face of declining rate of imports as a percentage of GDP.

#### Patterns of change in the labor market

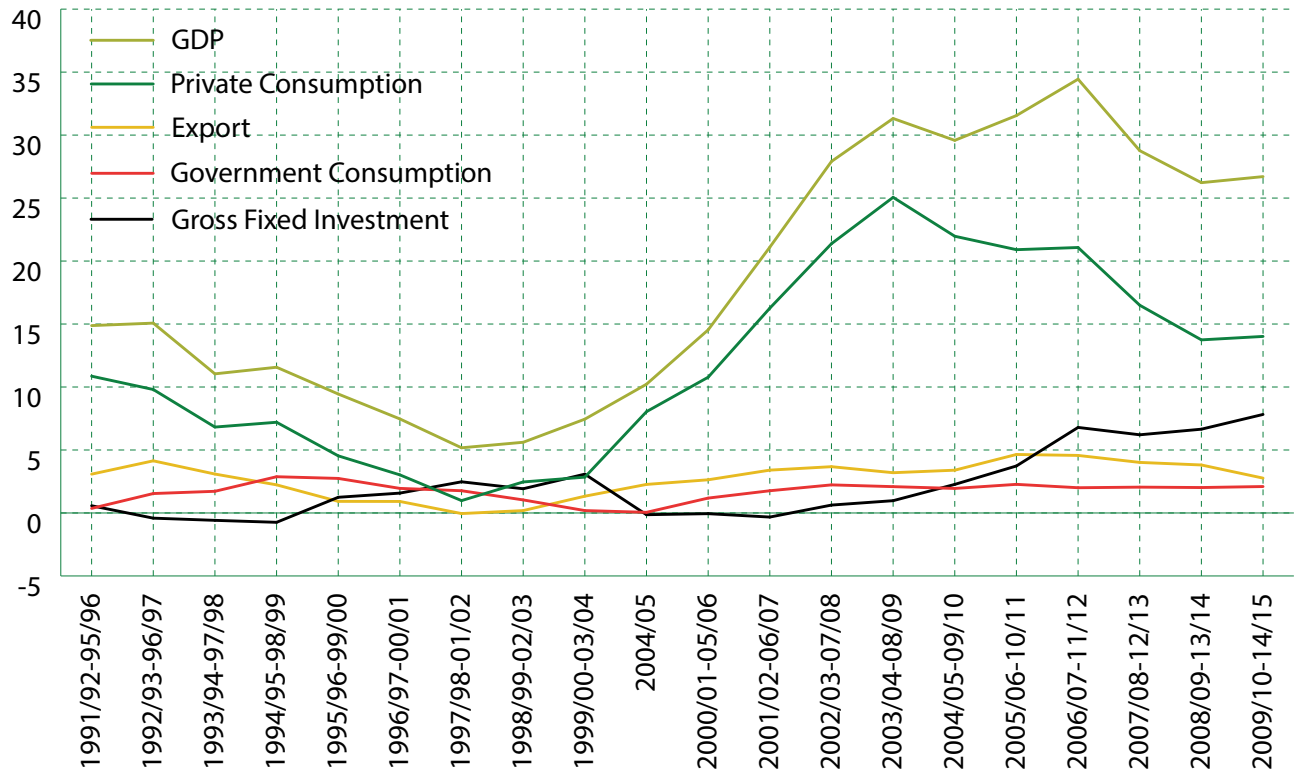
An important indicator pointing to structural change is the shift in the sector distribution of labor. Typically, a nation that claims to have been undergoing industrialization should see at various stages a shift of labor out of agriculture to the manufacturing sector. Between 2005 and 2013, the share of the agriculture sector in the total labor force declined by 7.5 percentage points. This could be due to a number of reasons including a more than proportionate increase in the job finding rate of the urban labor force, outmigration of labor from agriculture to other modern sectors, and migration of agricultural labor force abroad, usually the Middle East. The data seem to suggest that most labor separating the agriculture sector is joining the service and construction sectors. In fact, the share of the service sector in the total labor force increased by 5.8 percentage points. The other subsectors of the industry sector mainly the construction sector gained a 1.1 percentage point rise in the share of the total labor force. This is consistent with the fact that the leading sector in growth momentum is the construction sector followed by some subsectors in service sectors such as wholesale and retail trade.

An apparent challenge when viewing the intentions of the nation towards emergence, is the lack of appreciable shift of labor and skills towards the manufacturing sector. The overall share of the manufacturing sector in the total labor force has declined by 0.4 percentage points between 2004/05 and 2012/13.

A movement of labor from the agriculture to the service sector could still be considered a change in the positive direction as long as the net gainers of the subsectors are

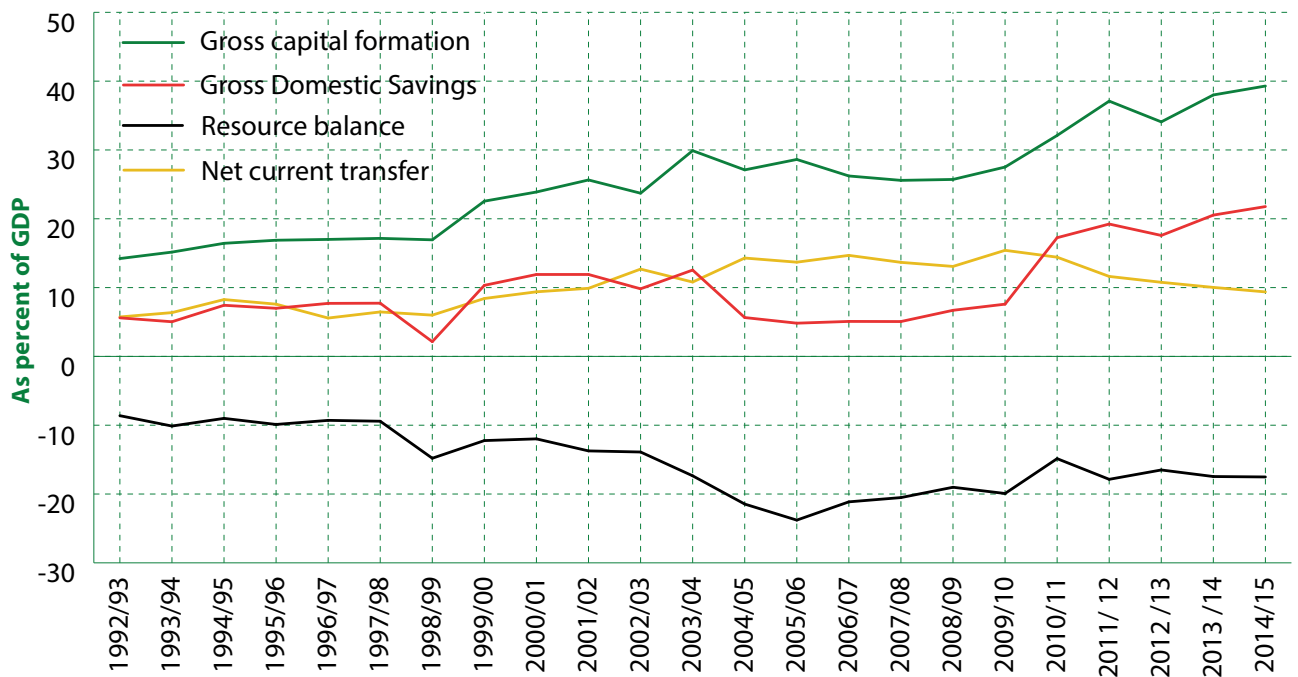


**Figure 11:** Contribution of components of demand to growth



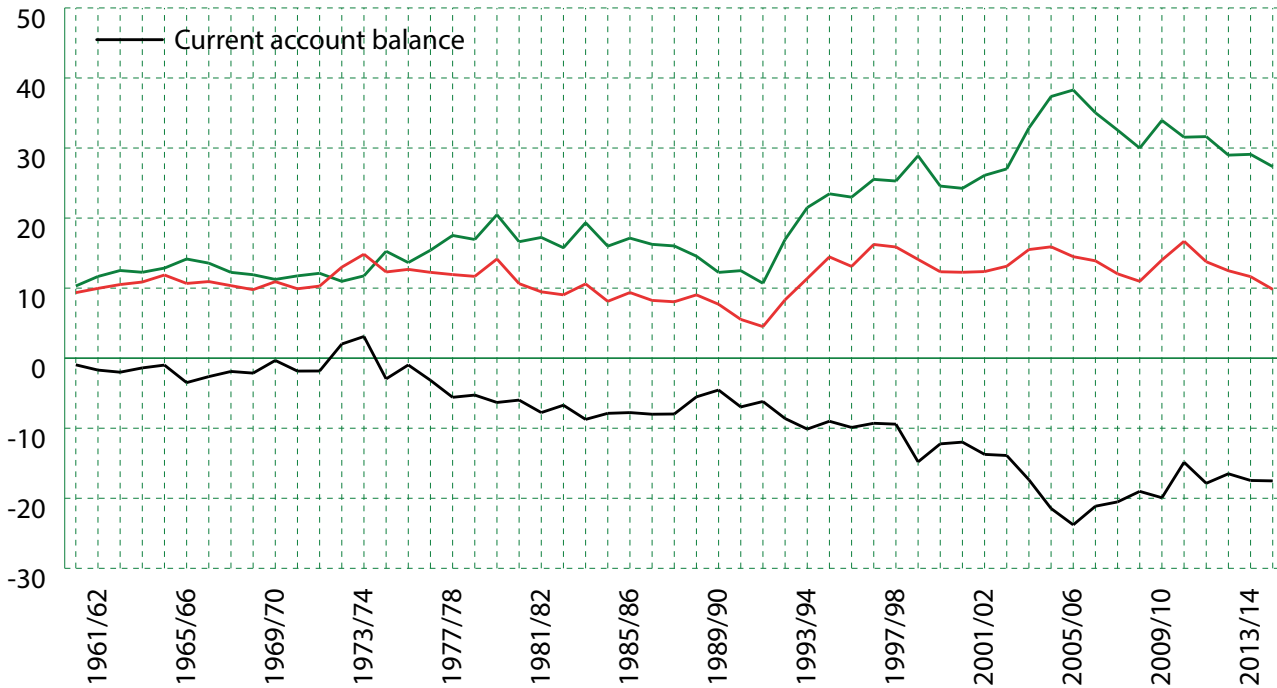
Source: Author's computations using data from the National Planning Commission.

**Figure 12:** Trends in gross fixed investment, gross domestic saving and net current transfers



Source: Authors computations using data from the Planning Commission

**Figure 13:** Trends in export and imports

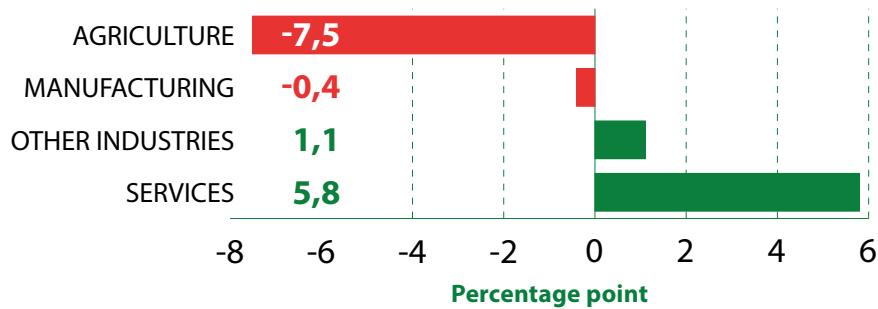


Source: Author's computations using data from the Planning Commission.

related to information technology, transport and communication with strong international linkages, and financial industries. A closer look at the change in the distribution of labor force during the 2004/05 to 2012/13 period

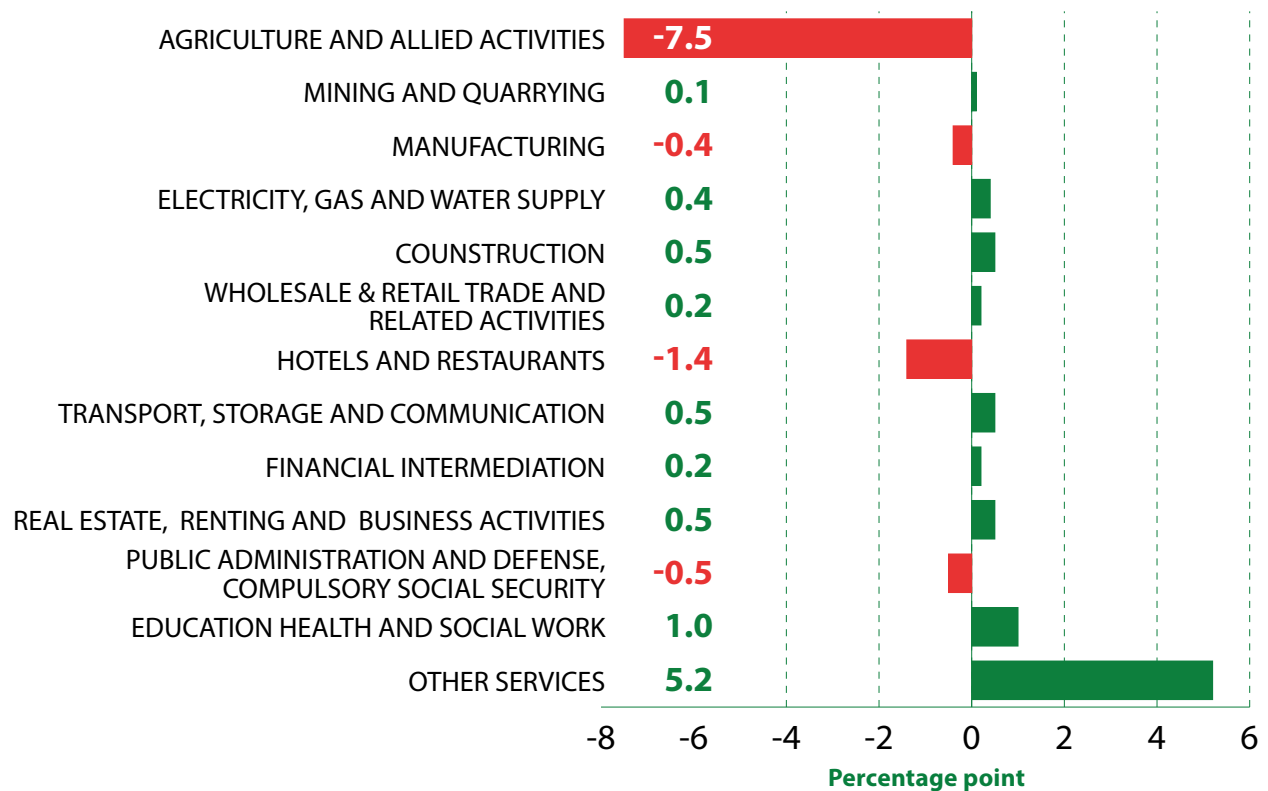
showed that significant labor joined the informal sectors. Households with employed persons, social, cultural, personal and household activities gained a net share of 5.2 percentage points in the total labor force.

**Figure 14:** Change in the sectoral distribution of labor (2005-2013)



Source: Author's computations based on data from Central Statistical Agency.



**Figure 15:** Change in the sectoral distribution of labor (2005-2013)

Source: Author's computations based on data from Central Statistical Agency.

## 2.3. Social Development

An important policy decision made by Government as early as mid- 1990s was the priority given to education. The purpose of investing in education from the long- run perspective was to lay the foundation for structural transformation as human capital is a major form of capability. It was also a means of smooth rural – urban migration that would entail healthy transformation. From the social point of view, it was a means of tackling poverty, reducing income inequality, and slowing the high fertility rate by encouraging girl's education. The policy has made education a rural phenomenon. As education has to be sustainably deepened, public universities were built. The number of universities increased from 2 in mid 1990s to 35 by the end of GTP I. The construction of about 11 additional public universities is underway.

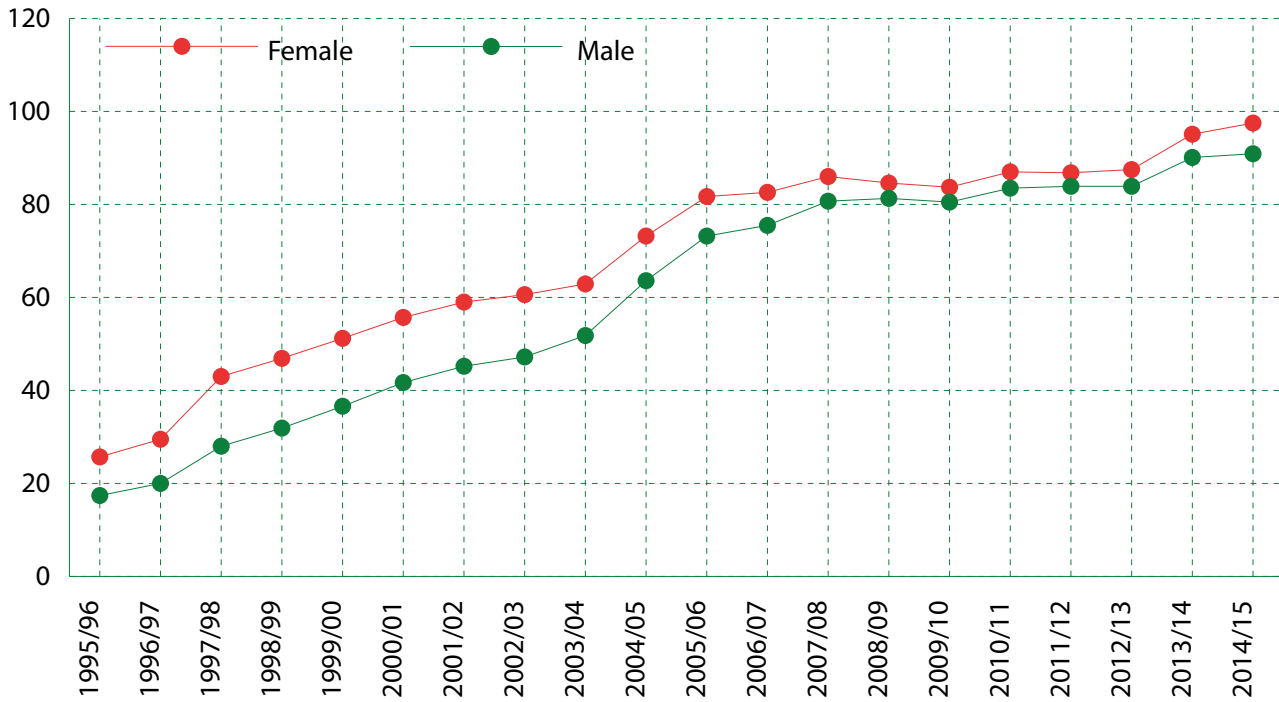
Such interventions helped to raise enrollment ratio in primary schools to almost 100 per cent by the end of GTP I. Net enrollment ratio in secondary schools stood at 20.7 per cent in 2014/15 from 11.8 per cent in 2004/05. Disparities in enrollment ratios among male and female students have been narrowed down at both primary and second-

ary levels. Fertility has declined from 5.6 in 2000 to 4.6 in 2015/16 (DHS, 2016). The total gross enrolment in the undergraduate program in both public and private higher learning institutions rose from 185,778 in 2009/10 to 729,028 in 2014/15; gross enrolment in public universities alone reached 618,370 in 2014/15.

The decline in the disparity of secondary schools enrollment between male and female is yet to translate to narrowing the gender gap in unemployment. Unemployment rates among male laborforce aged 15 years and above in urban areas declined from 17.8 per cent in 1999 to 13.8 per cent in 2013. Unemployment rates among female labor force in urban areas of similar age group declined from 33.9 per cent to 27.9 per cent during the same reference period. A 2 percentage point reduction in the gap in unemployment rate of male and female labor force is dismal [CSA, 2000; 2013].

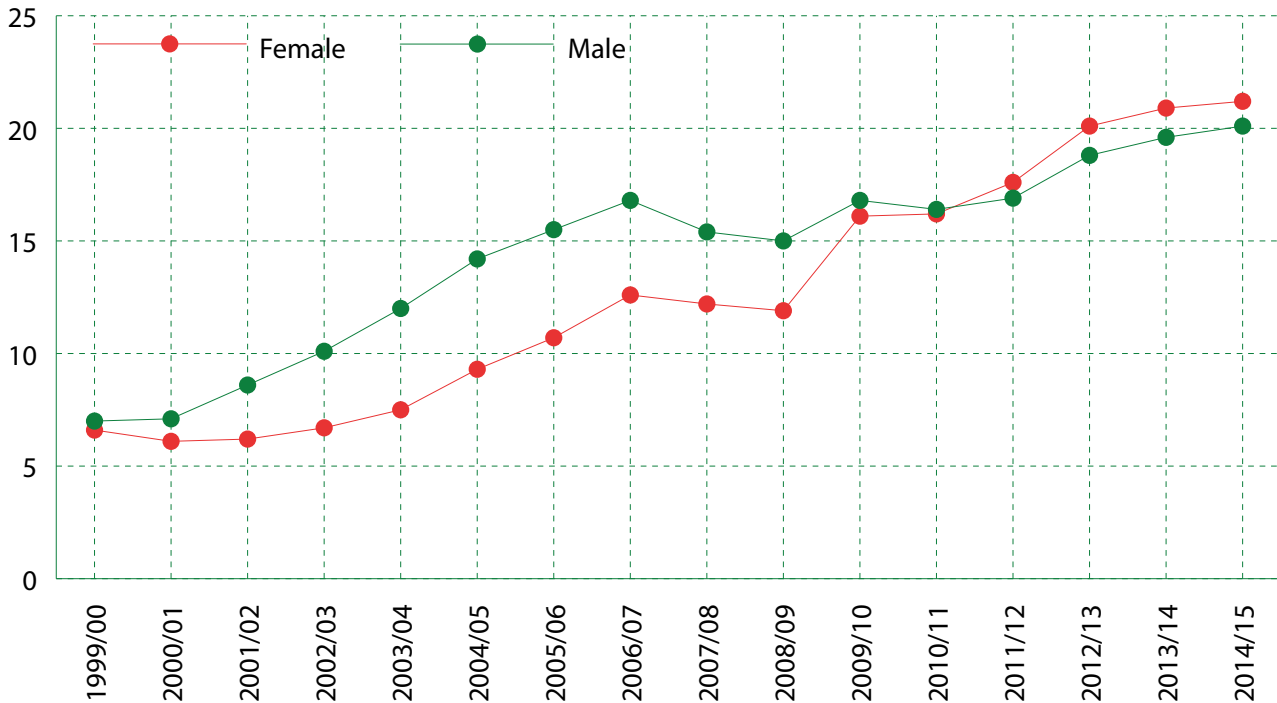
Investments in other social sectors such as health, potable water, and rural roads are encouraging. Major investments in social infrastructure were part of the mechanism

**Figure 16:** Trends in net enrollment ratio (Grades 1-8)



Source: Ministry of Education, 2015

**Figure 17:** Trends in net enrollment ratio (Grades 9-10)



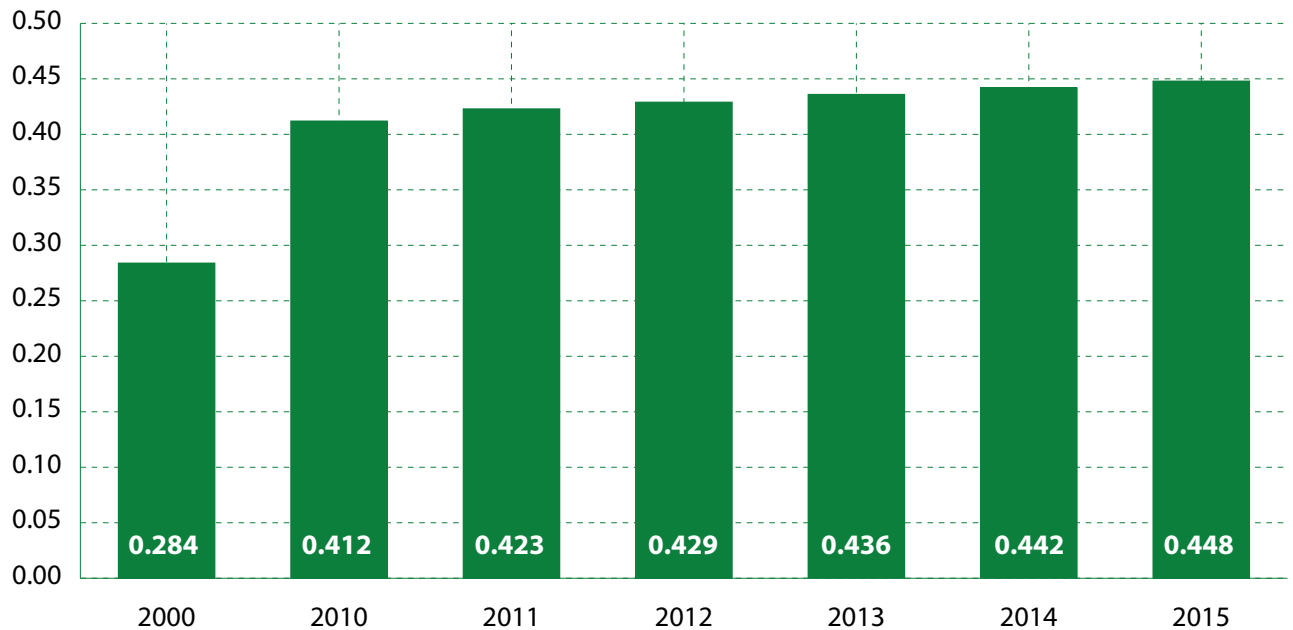
Source: Ministry of Education, 2015

through which the high economic growth episode was made a broad-based growth. The proportion of people living below the poverty line declined from 38.7 per cent in 2005 to 29.6 per cent in 2011 and estimated to have further declined to 23.4 per cent in 2015 [MDGR: 2014].

The results of these interventions improved longevity from 46 years in early 1990s to 64 years in 2015. The high

economic growth that helped to reduce poverty by a significant margin, the increased longevity, and improved levels of education and literacy rate translated into improved human development index (HDI). Even though the country has one of the lowest HDI in the world, it is also known for its high rate of improvement in HDI. Between 2000 and 2015, Ethiopia's HDI value increased from 0.283 to 0.448, an increase of 58.2 percent (UNDP/HDR: 2016)

**Figure 18:** Trends in HDI

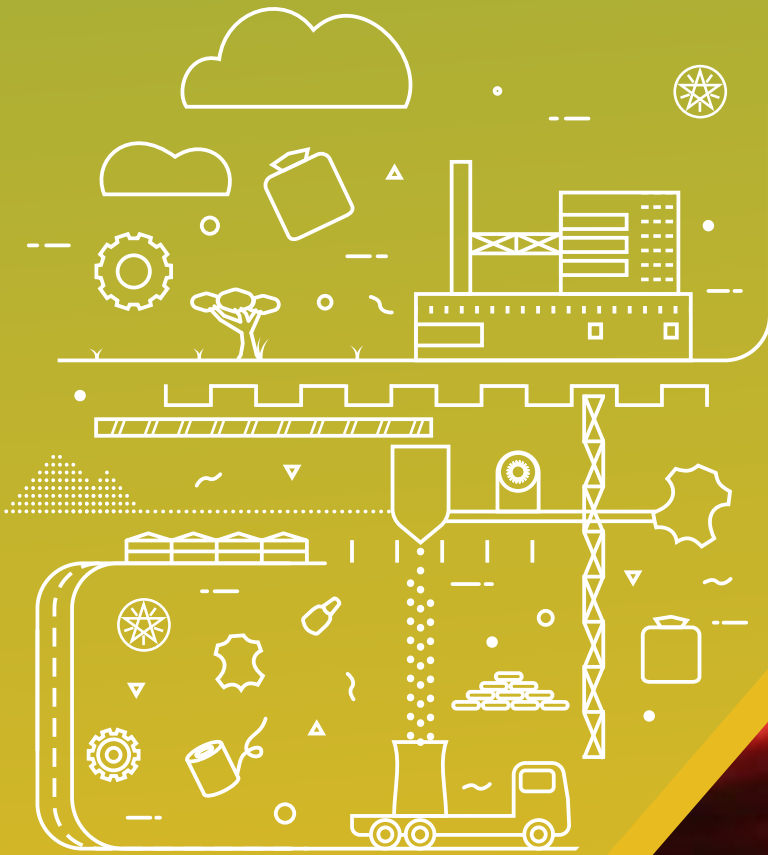


Source: UNDP, Human Development Report 2016.



# 3

## Institutional Setup



### 3.1. Core Government Institutions

An important aspect of the institutional setup in Ethiopia over the last two decades is the pragmatism in restructuring institutions, usually ministries, authorities, and commissions while maintaining core ministries intact. During the recovery period in around mid - 1990s, institutions related to food security and disaster prevention, investment promotion, and export promotion were in the frontline of development recovery. To that effect, the Disaster Prevention and Preparedness Commission (DPPC), Ethiopian Investment Authority (EIA), and Ethiopian Export Promotion Agency (EEPA) were established. With the commencement of the ADLI strategy, the Ministry of Agriculture had a more pronounced role. In addition a new institution called Ministry of Capacity Building was established.

When it was realized that there was no tangible export base to be promoted, the Ethiopian Export Promotion Agency was abolished. From the core ministries, Ministry of Agriculture and Ministry of Education had a more pronounced role until 2005. During PASDEP, which gave emphasis to urban development, the Ministry of Capacity Building ceased to exist and most of its activities were overtaken by the Ministry of Agriculture and Ministry of Education. A noticeable institution during PASDEP was the Ministry of Works and Urban Development.

GTP witnessed inclusion of more institutions and restructuring in some of the government institutions. The Ministry of Construction was one of the new additions with responsibilities of handling the new changes in the structure of the economy as the sector is leading the growth momentum. At planning level, the Ministry of Finance and Economic Development (MOFED) was mainly responsible for the coordination of the preparation and implementation of the development plans until late into the first phase of GTP. With the launch of GTP II, MOFED was restructured as Ministry of Finance and Economic Coop-

eration (MOFEC) while a new planning institution called National Planning Commission (NPC) was established and assumed some of the functions of MoFED. Another ministry that has got an important role in the new plan is the Ministry of Public Enterprises. Under GTP II, Ministry of Industry and the National Planning Commission have gained more prominence and stature.

As the role of government becomes increasingly critical in implementing the goals and targets of GTP, Ethiopia established two key institutions in 2013, namely: the National Planning Council, and the National Planning Commission. The National Planning Council is led by the Prime Minister and its members are comprised of cabinet ministers, Chief Executives and Deputy Chief Executives of regional states, The Governor of the National Bank of Ethiopia and other relevant organs. The mandate of the Council is to set targets on economic growth over five to fifteen years, providing guidance for planning and approval of development priorities at the commencement of each five year – plan, and review the periodic evaluation results of the performance of the plan submitted by the National Planning Commission, as well as ensuring the integrated implementation of the plan by federal and regional executive organs. In the same vein, the mandate of the National Planning Commission is to prepare five year (midterm) national development plans and fifteen year long term perspective plans, as well as conducting evaluations of the implementation of the plans. The Commission essentially serves as the secretariat of the Council. With its vested powers and duties ranging from assessing the factors of production required to realize the targeted annual economic growth to formulating overall macroeconomic and sectoral targets, and plan implementation matrix by line ministries at the federal and regional levels, the Commission plays a pivotal role in demonstrating the role of the state in the process of emergence.

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## 3.2. Specialized Institutions

In relation to industrialization, specialized institutions were also established in addition to the already established Investment Commission. These include: the Industrial Park Development Corporation (IPDC), the leather industry institute, and textile industry institute, and the

Metal and Engineering Corporation (METEC). METEC is a giant public enterprise under the army which is involved in a wide range of metal and engineering activities. It is hoped to serve as the country's base of industrial capability.

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## 3.3. The Participatory Process

An important tradition of the Ethiopian government in the area of development planning is the participation of various stakeholders before the plans are approved. Various line ministries and agencies submit their sectoral plans to the Ministry of Finance and Economic Development, and currently to the National Planning Commission. A comprehensive plan compiled and elaborated by the coordinating ministries is discussed among high ranking officials. Different forums are organized up to the grassroots level of administration to discuss and enrich

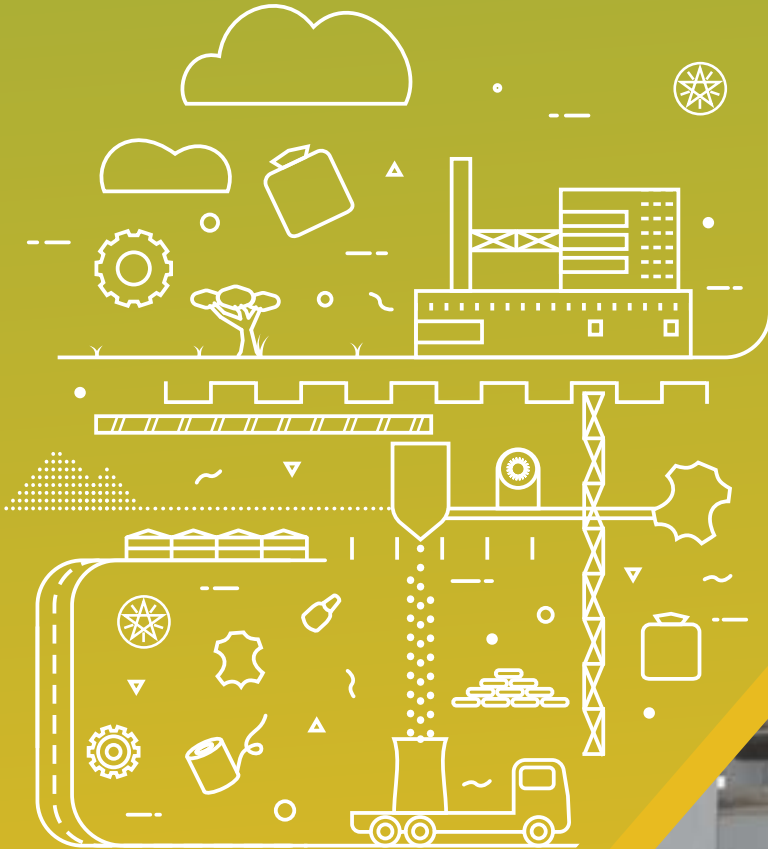
the plan. The draft plan is also discussed with the private sector and development partners in the presence of high ranking officials usually led by the Prime Minister. A final discussion is usually held at a level of high professionals led by the Prime Minister; participants include experts and professionals from private sector, academia, research institutes, and civil society organizations. The plan approval passes two stages: first through the council ministers and finally through the House Peoples Representatives (parliament).





# 4

## A Critical Evaluation of the Performance of the National Plans



## 4.1. The period of policy trial (1995 – 2004)

The period spanning from 1994/05 to 2004/05 can in many ways be considered as a period of policy trial characterized by myriad of reforms, including those recommended by the structural adjustment program (SAP). The period was also characterized by slow recovery in the economy where agriculture was burdened with the task of leading the economy and struggling to feed the nation. Serious political distractions such as the war with Eritrea and the split in the ruling EPRDF party were also observed during this period. The weak economic performances during this period led to haphazard implementation of policies with less regard to planning policy inputs and outcomes.

When the strategy of agriculture development – led industrialization (ADLI) was introduced in 1995, there had not been much debate against the tenets that agriculture should be a sector of priority. ADLI's focus on agriculture, education and infrastructure was hailed by many stakeholders. While the impacts of government interventions in education and infrastructure were to be seen in the medium to long run horizons. Efforts exerted on the agriculture sector were expected to pay off immediately in the form of food security before the strategy met its major goal of making agriculture a source of growth.

Nevertheless, value-added in the sector could only expand at a rate of 3.2 per cent – almost at a rate of population

growth) – after a decade long of official bias by the government in favor of the sector. As agriculture had a major share in the GDP (52 per cent in 1999/00), the pace of the economy had to be limited by the slow growth in agriculture. During the period 1995 -2004, GDP grew only at a rate of 4.5 per cent, which was too slow to reduce rampant poverty.

The apparent neglect to the demand side of the economy, in particular the urban sector, is believed to be the main reason for the weak performance in the agriculture sector. Industrialization was not even an issue. Major investments in infrastructure focused at constructing roads linking urban centers with little emphasis to roads within the towns. The consequence of the neglect to the demand side of the economy was reflected in the low price of agricultural outputs causing deflationary situation during bumper harvests. Due to weak capabilities and vulnerable forms of assets in the rural areas, food security was challenged by another round of drought in 2003 when more than 10 million people had to wait for food aid.

While interventions in the education sector were encouraging, success in the sector would only imply a liability for an economy that was too slow to absorb skilled labor. This led to the dissatisfaction of the urban population which was later demonstrated by near- loss of the ruling party to the opposition in major towns in the 2005 election.

## 4.2. PASDEP: An Episode of Demand Driven High Economic Growth

The typical feature of PASDEP that was launched in 2005/06 was that it emphasized urban employment through massive infrastructural investments in major towns. The private sector weighed in the momentum and invested heavily in the service sector which naturally had to be paralleled by the construction boom. The rise in commodity prices in the global trade favored exports of primary commodities. The rise in domestic prices for agricultural staples due to the expansion of demand in urban centers and the global food price hike improved the terms of trade in favor of rural farmers. As a result, rural income increased creating demand for manufacturing goods.

Parallel expansion of economic infrastructure, investments in the social sector in particular in education and health care were intensified. Public universities, health centers, and health posts were built. The result of the synergy between the public sector, the urban based service sector,

and the rural agriculture yield in high economic growth as real GDP grew at an average annual rate of 11 per cent.

The impressive economic growth episode over the five year plan period created demand and hope for further sustainable growth. Nevertheless, the high rate of inflation which arguably was triggered by a record high rate of expansion in the money supply, accommodating expansionary fiscal stances showed the limits of growth from the demand side. With the emergence of the construction sector as the powerhouse of urban growth, tendencies of rent seeking behavior began to stifle efficiency in particular in relation to urban land management. Such tendencies could easily be transmitted to service sectors making it difficult to redirect capabilities in the private sector towards the manufacturing sector. Probably the major weakness during PASDEP was the lack of institutional capability and political strength if not political will to deal with such rent seeking tendencies at the early stage.

## 4.3. GTP: A Test to an Economic Take off

The central objective of GTP that was launched in 2010/11 was to sustain the high growth episode of PASDEP through redirecting efforts towards the more propulsive sectors from the supply side of the economy and deepening structural change. It targeted laying foundation for structural transformation by consolidating on the expansion of economic and social infrastructure and at the same time paving the way for industrialization by directly investing in strategically important manufacturing industries.

Accomplishments in the social and economic infrastructure were encouraging. By the end of GTP I, enrollment ratio in primary schools reached 100 per cent. The number of public universities reached 35 from 2 in mid 1990s. The Addis Ababa – Djibouti railway was completed only one year into GTP II. The Addis Ababa light railway transfer system crisscrossing the city from North to South and East to West was completed in good time. The completion of the Ghibe III hydroelectric power added 1870 MW electricity when it operates at full capacity. The GERD project that is expected to generate 6,000 MW electricity has more

than 50 per cent completion rate. There were also signs of structural change in the sense that an increase in land productivity was observed in the agricultural sector. Additionally, the manufacturing sector showed signs of fast growth. Overall efforts in these and other areas of intervention resulted in a robust growth that had the power to reduce poverty by a significant margin. The number of people living below the national poverty line was reduced from 38.7 per cent in 2005 to 29.6 per cent in 2010/11; efforts during GTP I were expected to reduce it further. Indeed, life expectancy in the country reached 64 years in 2014 from a daunting 46 years in early 1990s.

Overall, there were positive outcomes under GTP I. However, the implementation of the plan was marred by challenges. There were delays in implementing important projects due to changes in design. Some quality and design problems were observed in completed projects. The early years of GTP witnessed high prices implying high cost of living. However, these are only symptoms of more serious fundamental issues which stand out as

problems of transformation in the country. One important challenge is the resilience of the agricultural sector after a decade long high growth in value added is tested thus signaling a lot needs to be done to ensure food security. In 2015, more than 10 million people lost their crop and livestock to the unprecedented drought induced by the El Niño phenomenon.

One could wonder why the farmers failed to resist a one-time drought shock and had sought food handouts from the government and donors if productivity was increasing in the agricultural sector leading to a sizable surplus over a decade. A rise in productivity in the agriculture and a rise in income thereof does not guarantee agricultural transformation. Even if agricultural income rose due to increased use of chemical fertilizers and high yielding seeds, there had been less investment in the overall rural capabilities such as agricultural machines, irrigation infrastructure, and rural based financial institutions. A study by the International Food Policy Research Institute (IFPRI) showed that fertilizer and improved seeds accounted for 8 per cent, and 12 per cent, respectively, of the growth in crop output between 2004/05 and 2013/14 while irrigation and capital had a share of 1 per cent each during the same period [IFPRI, 2016]. Farmers still rely on oxen – pulled plough to operate on their rain-fed plots of land. Such capabilities based on livestock as input and form of asset are lost during drought years.

An apparent absence of financial institutions in the rural areas implies less change on the social dualism of the rural population with entrenched customs of using surplus in the form of grain for traditional celebrations. Unlike capitalists, farmers are not operating for profit. In many ways, rural people are self-sufficient so that there would be limited marketable surplus. If they cannot save their surplus in the form of financial assets, either they have to dispose extra grains in conspicuous consumption during celebrations or hold assets in the form of livestock. The latter is no more an option with limited grazing land, and even worse, such assets are vulnerable to shocks. Thus, efforts of increase productivity and rural income needed to be accompanied by rural institutions and change in capabilities.

The second aspect of the challenge is the delay in the manufacturing enterprises. The government's decision to directly invest in strategic manufacturing industries such as sugar, fertilizer and textile had multiple objectives. Successful completion of the projects would help break the inertia of local private investors to invest in manufacturing sector, generate employment to graduates of technical schools and colleges, diversify export and secure foreign exchange earnings in the aim of financing further development endeavors, and ultimately deepen structural change by shifting resources away from less productive sectors to more productive manufacturing sector. Leaving aside the ambitious nature of the plan, the decision to carry out the installation of the projects with domestic capacity defies the basic fact that there were elements

of technology which cannot be readily transferred in the short-run. Multiple changes of design resulting from less acquaintance of experts with the technology, among other things, led to the delay of the projects in the manufacturing sector. An immediate consequence of the delay in the projects is a rising financial cost in the face of stressed foreign reserves in the country. Even more painful costs associated with the delayed projects in the manufacturing sector include the foregone employment opportunities, the unearned foreign exchange earnings, and more importantly the sense of hopelessness that may reign in, in particular delay feeds in to eventual failure.

The third gap that was exposed by the emergence of the economic boom in the service and construction sector is the weak institutional setup which failed to control tendencies of rent seeking, espionage, and corruption behaviors in these sectors. This in particular has been pronounced in the "land use market". The high demand for urban land by speculators and developers on one hand, and the limited supply of urban land by the government in the competitive bid on the other hand, pushed lease prices up to the extent that a plot of land was acquired at \$16,000 per square meter in prime locations in Addis Ababa. Price distortions lead to misallocation of critical resources. As it stands, more resources seem to be flowing to the construction sector where agents preferred to hold asset than invest in productive sectors such as the manufacturing sector. Abnormally the high wages in the less regulated construction sector had significantly reduced the competitiveness of the more transparent manufacturing sector.

At the same time land is the mainstay of more than 75 per cent of the population – the rural peasant households. The principle of structural transformation implies land needs to be shifted from a sector of low productivity to a sector of high productivity. In that sense, a hectare of land in the hands of the majority of traditional rural farmers can at best fetch an income of \$2,300 per annum while its alternative use by developers earns them in hundred thousands of dollars. For the poor farmer, it is a matter of right and livelihood to own the land irrespective of the difference in productivity. A win-win situation would have emerged if the transfer of land from farmers to developers led to increase in employment opportunities. There were two options for the developers: erecting factories capable of employing thousands with long term return for the developers or erecting white elephant building which could at best generate few employments in low skill jobs such as security and cleaning. It is apparent to observe that citizens who are privileged to have the means to invest preferred erecting buildings which can only generate few employment opportunities.

When loss of trust in the capacity of institutions to address such tendencies of dominance by rent seeking behavior over positive and developmental attitudes reigns among the society, normal challenges of structural transforma-

tion express themselves in the form of more sensitive issues such as class and ethnic tensions. Once legitimate economic grievances are hijacked by such tensions, emergence becomes luxury.

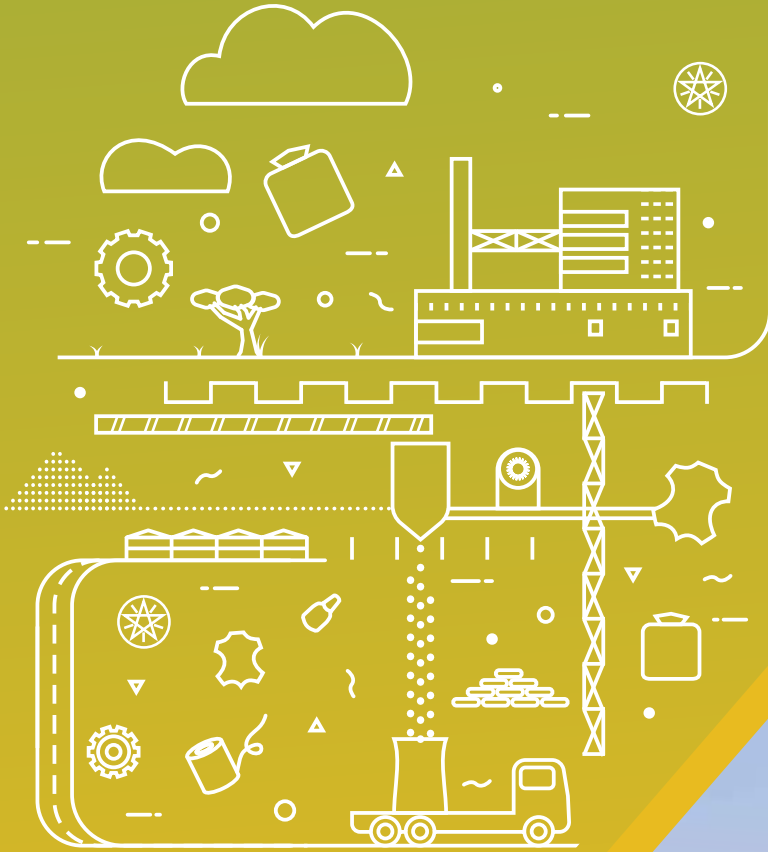
Needless to say, emergence cannot happen overnight neither does it happen by *fiat*. It should be a result of "standing on shoulder effect" by consolidating and building on capabilities the country has already built. Distraction at home results in a missed opportunity for development, and emergence would be abated. One important aspect

of ensuring unabated growth and eventual emergence is consensus. Policy interventions may help reduce poverty. But relative deprivation also matters. Inequality is bad not only because it is an unintended outcome of economic growth but also because it is an obstacle for further economic growth and development. The role of the state becomes critical at such juncture. Ethiopian at this moment has the challenge of addressing such institutional issues. The government has recognized these challenges in its current national plan - the GTP II - which is in its second year of implementation.



# 5

## The Manufacturing Sector: Moving the Hard Wheels for Emergence





## 5.1. Evolution and State of the Manufacturing Sector in Ethiopia

Ethiopia sought industrialization as early as 1940s with a ten – year plan to lay foundations on manufacturing capabilities. Features of entrepreneurial tendencies towards the manufacturing sector however emerged during the First Five – Year Development Plan of the Imperial Government of Ethiopia which was launched in 1957. The evaluation of the plan revealed that the private sector could not invest in the manufacturing industry as much as expected. About 60 per cent of the loans advanced to the private sector financed investment projects in the construction and housing sector. The apparent lack of enough investment in the manufacturing sector was blamed on low entrepreneurial capability of the indigenous people and behavior of seeking short term returns in the construction bubble.

The Imperial Government made industrialization in general and manufacturing sector in particular a priority in the Second Five – Year Development Plan with active intervention by the government. Public investments in key sectors such as cement, refinery, brewery and textile industries were made. Following the momentum, foreign private firms began to emerge. As a result, value added in the manufacturing sector grew by 16 per cent pushing the share of the industrial sector in the GDP from 9 per cent to 13 per cent over the plan period. With low productivity in the agriculture sector and rural majority almost self – sufficient in consumption, lack of raw material and demand became major challenges to the manufacturing sector. The Third Five – Year Development Plan that was launched in 1961 gave emphasis to commercial agriculture and agro-processing industries. The process was aborted with the deposition of the Imperial regime only to be replaced with socialist modes of production.

Based on the Soviet model, the Ethiopian government nationalized the few private firms and focused on expansion of heavy industries in principle be financed by surplus generated in the form of quota delivery from the peasant cooperatives in the agricultural sector. Productivity both in the cooperative farms and the manufacturing sector was too low to strive for the ambitious industrialization. The government also had to finance major civil and regional wars. In particular, the “employment for all” principle of the socialist system led to inefficiency in the

manufacturing sector. The rate of capacity utilization in major manufacturing firms was not more than 50 per cent. Under such a system, the private sector was not allowed to invest in businesses that require capital of more than Birr 500,000 (about \$250,000).

To align with global changes with the collapse of Soviet Union and to heed to domestic challenges, in 1989 the Government announced mixed economic policy thus inviting the private sector to play a role in the manufacturing and other sectors. In 1991, the newly inaugurated EPRDF government took over power and inherited manufacturing firms either operating at very low capacity or those that ceased operation altogether due to obsolete machinery and lack of spare parts.

The EPRDF made agriculture and rural development its priority under ADLI thus giving less attention to the manufacturing sector. In 2004, the share of the manufacturing sector in the GDP was 4.2 per cent. Even at the end of PASDEP the share of the manufacturing sector in the GDP stood at a mere 4 per cent.

The launching of GTP in 2010/11 was a result of the recognition that the high growth episode that was observed during PASDEP cannot be sustainable without structural change that involves a shift of economic activity to the manufacturing sector. Government is fully convinced that there is no alternative to industrialization in order to claim the future as equal citizen of the world and display assertiveness in the ever changing competitive international arena.

With the close supervision of the Ministry of Industry and overall follow up of the Office of the Prime Minister, the government pledged a direct public investment in the manufacturing sector at an investment outlay of \$11.4 billion in the sugar, chemical, pharmaceutical, cement, metal, textile, and fertilizer industries. Ten sugar factories and a fertilizer complex were to be erected in different regions of the country.

Value added in the sector grew during the first phase of GTP at a rate of 14.6 per cent pushing its share in the GDP to 4.8 per cent. This falls short of the high expectations. In particular, the growth came mainly from either FDI or pri-

vate investments in the sector. The highly expected sugar factories and the fertilizer complex were delayed. This has tested the domestic capacity of the country to accomplish industrial projects.

Overall, some important milestones have been achieved to base industrialization on a strong foundation during

the first phase of GTP. Even More importantly, lessons were learnt from the pitfalls and gaps that emerged during the implementation of GTP – I. The second phase of GTP focuses on further engagements in the manufacturing sector by a dressing gaps observed during the first phase. New directions include addressing major bottlenecks in energy, raw materials, and technology gaps.

## 5.2. Lessons from Challenges to the Manufacturing Sector during GTP I

An important challenge to the process was the lack of enough investment in the manufacturing sector, both in e magnitude and quality required by the plan to trigger structural change. Even worse, public investment projects in key manufacturing sector with the purpose of diversifying export earnings which were supposed to begin production by the end of GTP – I were delayed. A relatively better performance was observed in the infrastructure sector albeit with some delay due to designing and other problems.

The result of GTP – I on the overall transformation process was mixed. The completion of some infrastructure projects, in particular the launching of the Addis Ababa light train, the Addis Ababa – Djibouti railway, the Addis Ababa – Adama express road, and the Ghibe III hydropower dam have created excitement. But the delay of public invest-

ment projects in the manufacturing sector triggered disappointment. A successful completion of these projects could have curbed the foreign exchange constraint which the country is facing currently, saved meager resources, and created jobs for thousands of young people.

Two major questions are in order regarding the performance of the manufacturing sector. First, why the private sector tends to invest more in the service sector shying away from the manufacturing sector? Second, why the much anticipated public investment projects in the manufacturing sector delayed unbearably with increasing costs? The answers to these questions do not lead to easy answers. Nevertheless, the explanation could be found in the overall institutional capacity, technological readiness, infrastructure, and weak agriculture – industry linkages.

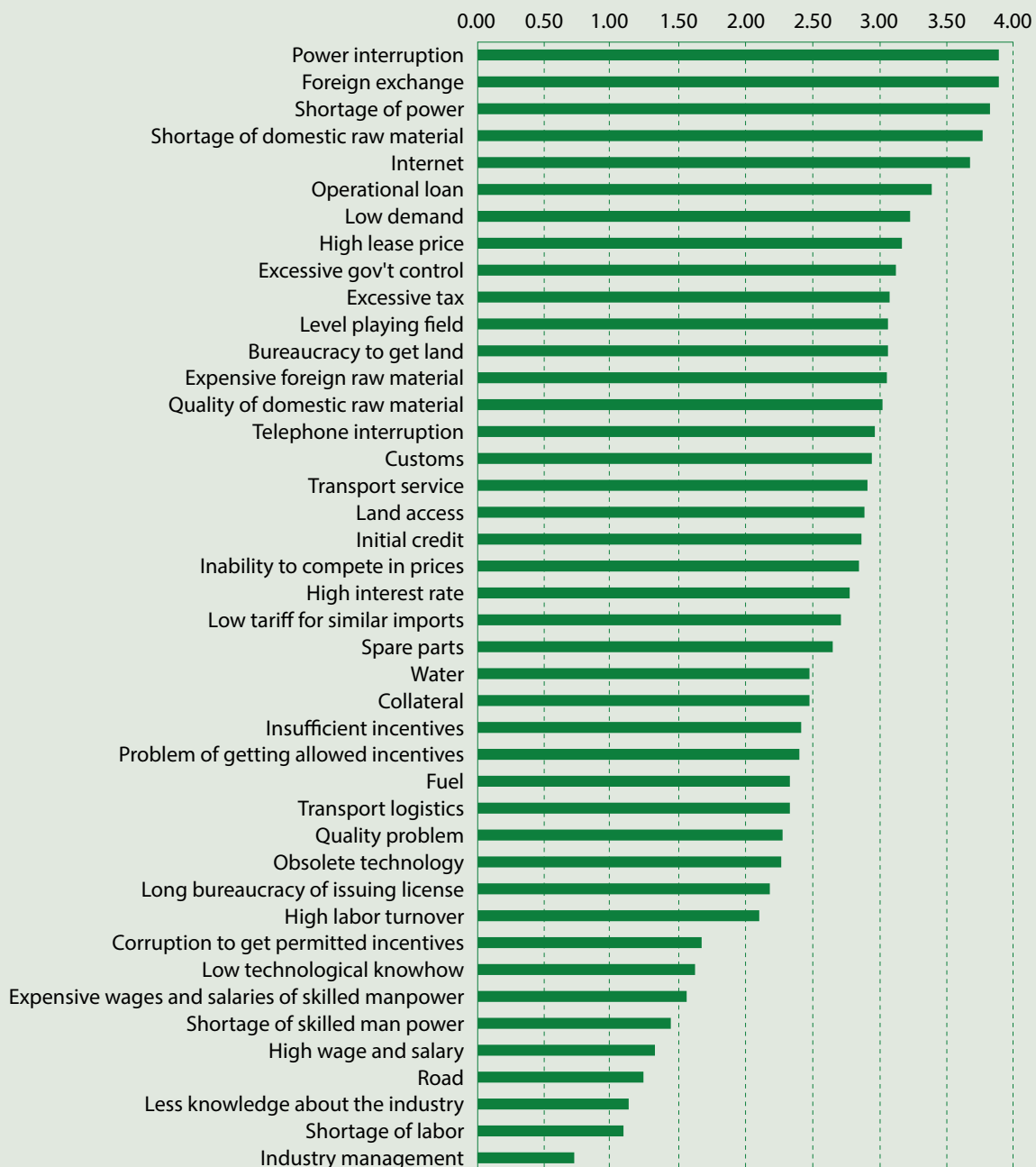


## Decomposing Growth by Demand Components

BOX 4

About 55 private and public manufacturing enterprises were requested to rate problems they face while in operation. The firms were selected from seven industry groups: food and beverage, textile, garment, leather, plastic, chemicals, and metal industries. A total of 42 potential constraints were suggested with options to identify more, if any. Degree of constraints was ranked from not a problem at all with a value of zero to a major constraint with a value of four. Power interruption and foreign exchange constraint ranked at the top with equal score of 3.89. These constraints were followed by limited access to electric power, shortage of domestic raw materials, and poor internet services with scores ranging from 3.82 in the case of access to electric power to 3.67 in the case of internet services. Constraints that are ranked as medium and above include access to credit in particular operational loan, weak market demand, high lease price of land, excessive control by regulating institutions, excessive tax, absence of level playing field for competition, unnecessarily and long bureaucratic red tapes to get land, expensive raw materials from abroad, and poor quality of domestic raw materials.

**Figure 19:** Constraints in the manufacturing sector in Ethiopia as ranked by responding firms



Source: Own survey results

**Power interruption and power shortage:** The results indicate that power shortage and electric power interruption were at the top of major constraints for manufacturing sector development in Ethiopia. Assuming that Gibe III has yet to generate power at its full capacity, Ethiopia has currently an installed capacity of around 3,000 MW of electricity. A typical firm in metal industry requires energy to the tune of 300 MW. Only ten of manufacturing factories of this magnitude would require energy of 3,000 MW, which the country does not currently have. That is why completion of the GERD becomes critical in fostering industrial development in the country.

**Foreign exchange constraints:** This has been a major constraint to import inputs, spare parts and machineries. Both high demand for imported goods and weak export performance due to unfavorable terms of trade for primary commodities put stress on the country's balance of payment. There is high demand for imported goods for two major reasons. The first is the high demand for imported consumption goods following the rise in income. The second reason is the high demand for capital goods and raw materials including fuel due to the investment expansion in the country.

**Constraints in domestically produced raw materials:** The manufacturing sector in Ethiopia has been relying on imported raw materials even in the areas where the country was supposed to have a comparative advantage. There are three aspects of the problem related to the domestic raw materials constraint: shortage, seasonal supply, and poor quality.

**Poor internet services:** Internet connections have been so weak and interruptions are rife. Not only are firms constrained in making online transactions, but also face transaction costs in making transfers through banks, paying bills, and paying taxes when the internet is down at such service points.

The gravity of the problem posed by these and other related constraints is manifested by the low rate of capacity utilization. Data from Central Statistical Agency (CSA) shows that the average rate of capacity utilization among large and medium scale manufacturing industries in 2014 was 67 per cent. The rate of capacity utilization for key manufacturing industries such as chemical, leather and metal industries range from 49 to 55 per cent.

**Technological knowhow:** This was somehow not reflected as a major problem in this survey. A rigorous research is required to find out the gap in technology and skill by comparing domestically owned firms with FDIs. But the role of technological gap in the form of tacit knowledge is reflected in the delay of many of the public enterprise projects that were awarded to the domestic firms such as Metal and Engineering Corporation (METEC). One would ask why projects get done when awarded to foreign firms but are delayed and even fail when operated by homegrown firms. The difference should lie in the skill and technological gaps in addition to capacity gaps such as finance.

### 5.3. GTP – II and its Strategy Towards Industrialization

The Ministry of Industry of the Federal Democratic Republic of Ethiopia has prepared three documents on the industrial strategy, roadmap to industrial development, and institutional setup for the implementation of the industrial development. These documents are believed to lead the country's direction on industrial development for the next fifteen years. The industrial development objectives, goals and strategies on the GTP II document are therefore the reflections and highlights of the more elaborated documents prepared by the Ministry of Industry. The review in this article is limited to the main issues raised on the GTP II document.

The new directions of GTP II in the development of the manufacturing sector in Ethiopia are anchored on the overall aims of:

- Increasing productivity, quality and competitiveness among both existing and upcoming manufacturing industries,
- Investing in labor intensive light manufacturing industries with global standard of quality and efficiency,
- Increasing the capacity of industrial engineering technology,
- Diversifying the country's export to and basing on light and heavy manufacturing,

- Increasing the production capacity and competitiveness of existing industrial firms,
- Attracting domestic and foreign direct investment in the manufacturing sector,
- Creating synergy between the development of high tech industries with the development of light manufacturing industries,
- Expanding heavy metallurgy engineering, chemical, and pharmaceutical industries, and
- Promoting export of manufacturing goods along with efforts of meeting domestic demands for potentially substitutable imported goods.

The main objective of the industrial development strategy of GTP II is to ensure that manufacturing industry is the main driver of growth to bring about structural transformation in general and be a source of productivity, main source of export earnings, a medium of technological transfer for overall technological capability, and a source of employment in the changing rural – urban demographic balance in particular.

The plan has a target of an average growth rate of 20 per cent per annum of an industrial output over the five – year plan period and increase the static share of the industrial sector in the GDP from 15.1 per cent in 2015 to 22.3 per cent in 2020. In particular, the manufacturing sector is expected to grow annually at a rate of 21.9 per cent over the five year period.

Export oriented productions are planned in key strategic sectors. These include:

- Textile and garment industry,
- Leather and leather products industry,
- Metal engineering industry,
- Meat, dairy and honey processing industry,
- Chemical and construction inputs industry,
- Agro-processing industry, and
- Pharmaceutical industries.

The plan has also elaborated on the execution modalities of the objectives of the industrial development. Separate programs for capacity building of institutions; promotion of investment in the manufacturing sector; capacity building on efficiency, competitiveness, quality and technological standards; government support for manufacturing industries; defining the role of public enterprises and capacitating them accordingly; developing small scale and medium enterprises; and ensuring climate resilient industrial development.

Among these, the program of all round support of the government to the manufacturing industry is planned to be carried out in the form of industry park development and expansion of clusters, support on investment management of manufacturing industries, provision of credit and foreign exchange to manufacturing industries, and granting tax incentives.

### Modalities of addressing specific constraints

Energy, finance in the form of foreign exchange and raw materials are recognized to be critical challenge areas that need to be addressed in the implementation of the industrialization strategy under GTP II. Gaps in the area of technological transfer are also in the high priority list.

**Power:** Two major gaps have been identified in relation to electric power. The first is the mismatch between the growing demand for and limited supply of electric energy. The second is obsolescence of the transmission and distribution lines of electricity. In particular, the latter was identified as a major cause for the intermittent interruption of electric power in Addis Ababa and other major towns.

GTP – II envisaged four key solutions to fix the problem related to electric power. Primarily, the overarching goal of increasing the supply of electric energy mainly from the hydroelectric sources and other environmentally friendly sources was emphasized. To that end, the Ghibe III dam which has an installed capacity of generating 1870 MW has been completed and begun generating electricity. The completion of the mega project on the Blue Nile famously known as the Great Ethiopian Renaissance Dam (GERD) is given priority. Currently, more than 50 per cent of the construction of the dam has been completed. A successful completion of this project would be remarkable as it would not only solve a major constraint in the process of industrialization of the country but also plays a key role in generating foreign exchange and enhancing regional integration.

The second approach to tackle the problem is to rehabilitate and replace old transmission and distribution lines of electricity in Addis Ababa and some major towns in the country. The total cost of upgrading the distribution lines in Addis Ababa is estimated at about 1 billion US dollar. The project has currently been underway.

The third line of circumventing the constraint is administering separate power sub-stations for large manufacturing industries. This would enable manufacturing industries to get access to direct lines of electricity with less probability of power interruption.

The fourth approach is to separate distribution lines to businesses and households. This is believed to improve energy efficiency and reduce the frequency of interruption of electricity for businesses.

**Technological transfer:** The critical gap in transferring technology is well noted in the GTP II. There have been three layers of modalities identified by the plan to address the gaps. The micro and small enterprises project, the regional clusters for the development of small and medium scale enterprises, and the national project on industrial park development are crafted to foster industrial development in Ethiopia.

The micro and small enterprises are meant to tackle urban unemployment. This has currently been complemented with urban safety net program which targets the urban poor in helping them generate their own income from small businesses.

The regional cluster for the development of small and medium scale enterprises has a rather ambitious plan of basing long-term industrialization program on the indigenous people. The youth and in particular, graduates from technical schools and colleges will be provided with financial and technical support in clusters of sheds along the various regional states to start up small-scale manufacturing industries. Funds will be availed for the enterprises to lease machines. The potential entrepreneurs who begin their business at small scale level are expected to graduate to medium scale level in a fairly pre-set time. This project has the objective of inculcating the culture of industrialization among the youth and harnessing the future industrialists with a process of learning by doing at a shop floor level. A compulsory graduation from small scale enterprises by each entrepreneur to move to the next ladder implies a firm growth unlike the norm in the traditional business where firms either continue with their starting capacity or die before they grow.

The industrial park development (IPD) which is run by Industrial Park Development Corporation (IPDC) has grand intentions of transferring technology, creating employment, and generating foreign exchange earnings. The parks are designed to have a number of factory sheds to house mainly foreign firms specializing in specific industries and technologies. Domestic firms are allowed to operate in those shades primarily to facilitate knowledge and skill transfer. The industrial parks are provided with the necessary infrastructural facilities.

So far, twelve industrial parks have been identified across the country in a manner that ensures balanced regional development. Three industrial parks were to be installed in Addis Ababa representing the central part of the country. The remaining nine industrial parks are distributed to the East, North East, North, North West, West, and South of the country.

Two major industrial parks have already been completed. The Bole Lemi – I industrial park in Addis Ababa and the Hawassa industrial park in southern Ethiopia have been inaugurated. Most of the sheds have been allotted to foreign investors. Ten manufacturing companies are operating in Bole Lemi-I industrial park specializing in leather and textile out of which nine of them are producing goods for foreign markets. The companies have so far created jobs for 7,448 citizens.

**Linkages:** Another important gap in the Ethiopian bid towards industrialization is the weak linkage between agriculture and manufacturing sectors. The country relies on costly imported inputs to its infant industries. A number of measures are being put in place under GTP II. To that effect, the Ethiopian Inputs Supply Enterprise has been established which is mandated to buy inputs for the manufacturing sector from local and foreign sources. It stores strategically important raw materials to sustainably supply manufacturing firms.

Besides, a study on cotton development strategy has been underway to exploit the county's potential on cotton. The study is also expected to curb problems associated with quality and seasonal supply of domestically produced cotton.

Moreover, harmonizing the goals of value-addition and maximizing on foreign exchange earnings from the

**Table 5:** Industrial Parks

Industrial park	Total area in the first phase (hectare)	Location
Bole Lemi 1	174	Addis Ababa (central)
Hawassa	130	South
Bole Lemi 2	189	Addis Ababa
Kilinto	279	Addis Ababa
Adama	150	East
Diredawa	150	East
Mekelle	75	North
Kombolcha	75	North East
Jimma	75	West
Bahir Dar	75	North West
Debre Berhan	na	Central
Arerti	na	Eastern central

Source: Industrial Parks Development Corporation.

export of raw materials has been planned. As long as the raw materials are demanded in the domestic market, priority would be given to the use of the raw materials by domestic firms. This has a dual purpose of easing the input constraint of domestic firms and increasing value addition rather than exporting primary commodities.

A more robust program with a multitude of objectives is the project on the Integrated Agro Industrial Park (IAIPs) in Ethiopia. The parks that are intended to be established in major agro-ecological zones of the country will have state of the art infrastructure. The parks are aimed at attracting private investors to set up food processing plants, reducing post-harvest losses, adding value to local content of food, linking farmers in clusters to food manufacturing plants, securing forward linkages for the processed produce, and creating jobs and driving rural economic growth in the country.

Metals and chemicals have been critical inputs to the development of manufacturing industries. Ethiopia has so far been relying on imported metals and chemicals as raw materials. This has compromised the domestic industrial linkage with little value added. One major area of focus during GTP II is metallurgy and petro chemical industry. The country has a prospect of developing its own iron ore in the mining industry with the purpose of supporting its industrial development strategy.

**Public – Private – partnership (PPP):** Strengthening public-private- partnership is another modality by which the industrial development strategy can be fostered. The Ethiopian government has initiated the strategy of private sector transformation under GTP II. Various incentives have been initiated including equities on joint ventures, and access to credit.

## 5.4. Potential Challenges Ahead

Industrial policies and strategies elaborated on the GTP II are well informed by practical experiences of the previous plans. Nevertheless, as the economy makes a transition from an agrarian based economy to a modern economy, economic management tends to be sophisticated, requiring efficient institutions that are capable of handling the new realities. Institutions in the lines ranging from handling licensing to providing logistical support of export of manufacturing industries require international standard of efficiency. This remains to be a challenge in the years to come.

Naturally, agriculture has been simple and transparent operated by individual households with almost independent decisions on the production, marketing, and consumption. The modern sector to which manufacturing industry is a part involves many stakeholders who would be tempted to get their share in the fast growing niche industries in the manner that corrupts the growth of the sector. This might be reflected in the form of rent seeking and corruption behavior of agents. Though the Ethiopi-

an government vowed to deal with such tendencies with forceful actions, this challenge does not seem to go away at least in the short run.

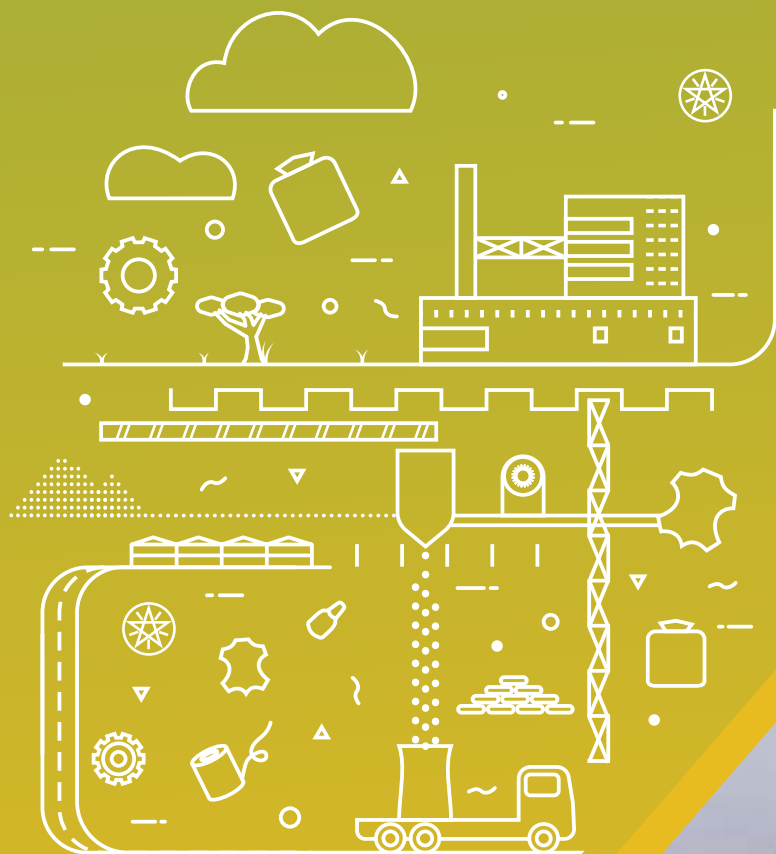
An apparent challenge in the industrialization process is the seemingly misallocation of human capital. Currently, with the booming of the construction sector, daily wage in the sector is by far greater than in the manufacturing as well as the service sector. In fact, daily wages earned by hired laborers even in the traditional agriculture is much higher than the salary of college graduates in the manufacturing and public service sectors. This would have two serious implications: the first is that with low return to education, building a knowledge-based economy might prove difficult. Second, the manufacturing industry which has to be globally competitive cannot compete for labor with the construction sector which to some extent is a means of holding asset vis-à-vis easy money. Evidence shows that there is a high turnover of industrial workers in the textile industry.





# 6

## Conclusion and Lessons Learnt



Experiences showed high growth episodes due to investments in social and economic infrastructure and temporary improvements in terms of trade of primary commodities can only be sustained with deep structural changes in the economy. The Government of Ethiopia is convinced that industrialization through a shift of economic activities from sectors of low productivity to sectors of high productivity, in particular, the manufacturing sector is the most viable option to ensure emergence.

Following the country's desire to industrialize, Ethiopia has embarked on a plan called the Growth and Transformation Plan (GTP) starting in 2010/11. During the first phase of GTP, important milestones were achieved in laying foundations for structural transformation. While a sizeable stock of capacity was accumulated in the form of human and physical capital and an average GDP growth rate of 10 per cent was registered during the plan period, deepening structural change by investing in the manufacturing sector proved to be challenging.

The second phase of GTP launched in 2015/16 is capitalizing on the performance and lessons learnt from the first GTP and pushing further to deepen structural change by investing in the manufacturing sector. The plan is addressing shortcomings and constraints in the manufacturing sector. In particular, the issue of capacity and knowledge gap in the area of new technology adoption has been approached through industrial park development. To this effect, different industrial parks have been identified in major regions of the country under the supervision of the Industrial Parks Development Corporation, the Ministry of Industry, and the Prime Minister's Office. Besides, clusters of medium and small scale industries have been targeted to base the country's long term industrialization on domestic capacity.

Given the fact that agriculture still remains as the mainstay of the economy, employing 73 per cent of the labor force and generating 37 per cent of the GDP, Integrated Agro-Industrial Parks with a multitude of objectives are to be launched along the major agro-ecological zones of the country.

An important take away from the planning experience of Ethiopia particularly over the last two decades towards

emergence is that development planning has been an iterative process. Each successive plan takes over the strengths from the preceding plan and mainly attempts to fill gaps. While focusing on long-term capabilities the return of which may take unbearably longer time, giving due attention to short term challenges such as food insecurity, and income inequality is critical. To this end social mobilization is important in the process of planning and implementations of important goals of emergence, but promises have to be delivered.

In such a process, the state has got an important role beyond provision of public goods and ensuring macroeconomic stability: it has a role and responsibility of eradicating poverty and underdevelopment. The role of the state in Ethiopia over the last 25 years since 1991 has offered the following vital lessons:

- **Understanding that initial conditions do matter.** Ensuring peace, security, and stability was high on the agenda during the early 1990s. Fiscal and political decentralization to even the lowest units of administration on the one hand and building one of the most disciplined security personnel were important steps towards securing peace and stability. A policy of friendly relations with neighboring countries and regional blocks was also emphasized.
- **Sustainable long-run solutions come from investing in capabilities.** One of the long-term engagements the Ethiopian government is known to have embarked on is investment in the economic and social infrastructure. This was critical in laying foundations of accumulations of physical and human capital. Its investment in security and stability has also earned Ethiopia a significant political capital including a trust from major allies.
- **Inclusiveness is important.** There was already a precedence during the Imperial era where leaving the woes of the rural mass to the mercy of long-run solutions risked the deposition of the very regime. And there was no wonder when the Ethiopian People Revolutionary Democratic Front (EPRDF)-the ruling party-launched a sort of strategy what is termed as the Agriculture Development-Led Industrialization (ADLI). After all, to deal with poverty, one needs to target where poverty harbors.

- **Strategically capitalizing on resources:** Ethiopia opted for the harnessing of its natural resources as strategic inputs. While the leadership was not enthusiastic about the prospects of gas and petroleum at least at the initial level of development, it devoted whatever it takes to develop its water resource. The huge investment on the Great Renaissance Dam on the Nile is a case in point. The general belief is that an appropriate time would come when use of mineral resources such as the hydro carbons could be more strategic and lubricating to the economy.
- **Prudent use of financial resources:** During the early 1990s, Ethiopia was not even capable of covering its recurrent expenditure. The government was glad to receive the relatively significant flow of financial resources from developed countries and multilateral partners. The government was committed to effectively utilize this resource towards capacity building in key sectors. One potentially serious challenge in relation to aid money was the threat of corruption. The government's strategy was to consider the aid money as investment to address poverty and other areas of development deficit .
- **Mobilization is important:** The Ethiopian government through its ADLI strategy focused specifically mobilizing the rural population deploying thousands of agricultural extension workers, health extension workers, and teachers. The recent crowd funding of the GERD is also a result of social mobilization.
- **Be pragmatic on policies and even ideologies whenever it helps but never compromise on basic principles:** Until EPRDF took over power in 1991, it used to be a committed disciple of Marxism-Leninism. In early 1990s, there was no viable communist state to emulate and get support from. As time passed, communism seemed not to be a viable option as a system. The ruling party officially declared that it would be guided by free market economy. In late 1990s, IMF approached Ethiopia to extend financial support with conditions but the Government was able to negotiate on its own terms.
- **Party discipline:** At the center of all policies and strategies lies a strong government commitment. Ethiopia had in the past benefited from the party discipline to compensate for the less competent and in some cases less motivated civil service. For instance, corruption has been a reality in the country. What makes the Ethiopian case unique and relatively less worrying was the fact that the party leadership recognizes it as a major threat of development and tends to clear itself through a sort of self-criticism called '*gimgema*'. Whether this discipline triumphs over the recent challenges of the erosion of selflessness among the ruling elite is yet to be seen.

While the government efforts towards industrialization are encouraging, it has a challenge of transforming agriculture, reforming the labor market in such a way that education and excellence can be rewarded, increasing institutional capacity, and combating the tendencies of rent-seeking.

Emphasis need to be given to deepening quality of infrastructure. While goals of expanding employment op-

portunities and high growth episodes can be achieved in the short run with expanding infrastructure, long term goals of structural transformation and sustainable development requires adhering to the principles of efficiency that comes with quality and efficient use of resources. The various infrastructural projects need to be coordinated to maximize returns from these high cost investments.

Expansions in access to education in the country were appropriate. Nevertheless, education needs to be purposeful and rewarding. One way of ensuring educational quality is through a policy of meritocracy, encouraging competitiveness, and rewarding educational excellence.

One key sign of structural transformation is the ability to compete in the global market through successful exports. Ethiopia's export with its current structure can hardly be affected by short term policy interventions such as devaluation. There need to be a serious effort in changing the structure of the export sector. Parallel with efforts of completing the currently delayed multi-billion dollar agro-industrial projects such as the sugar factories; investigations into the apparent failure to exploit the comparative advantage in the coffee sector to emerge as a dominant exporter in the global market is required.

Ethiopia with its strong dependence on agriculture, structural transformation via industrialization also implies agricultural transformation. Parallel with the efforts of increasing land productivity, focus on increasing labor productivity, and most importantly increasing and diversifying agricultural capabilities in the rural economy is crucial. Harnessing water resources for agricultural development, replacing the hoe and the plough with better tools, helping change the modes of savings and asset formation of the rural farmers from grains and livestock to financial assets may help transform the agriculture sector.

With the current socio-economic dynamics in Ethiopia, urbanization is inevitable. There need to be serious urban planning in Ethiopia in readiness to the challenges of sustainable urban development. Without proper long-term planning, urban challenges would be more difficult to address than rural based challenges. Urban employment, mass transport, environmental issues, and crime management are among the issues to be alerted on.

Long experience of planning have earned Ethiopia good economic policies. As much as structural transformation is a challenge in itself, institutional transformation seems to be a critical element. Consensus among the society in the development process, support of the society to the government's development endeavor, and institutional capability within the government and civil services to deal with new challenges that come with economic emergence are critical. One important lesson to address the challenges of institutional transformation is to understand that emergence does not come without cost. Consensus among the society would minimize the cost of development and Inclusiveness is a prerequisite for consensus.



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