Ethiopian Industry Development Roadmap

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Acronyms

ASTU	Adama Science and Technology University
CSA	Central Statistical Authority
EFY	Ethiopian Fiscal Year
ECBP	Engineering Capacity Building Program
EC	Ethiopian Calendar
EEPA	Ethiopian Electric Power Authority
ERCA	Ethiopian Revenue and Customs Authority
ETB	Ethiopian Birr
FDI	Foreign Direct Investment
FEMSEDA	Federal Medium and Small Enterprise Development Agency
FGD	Focus Group Discussion
FIE	Foreign Invested Enterprise
GDP	Gross Domestic Product
GTP	Growth and Transformation Plan
GVP	Gross Value of Production
HEIs	Higher Education institutions
HR	Human Resource
HRD	Human Resource Development
ICT	Information Communication Technology
ID	Industrial Development
IDSPD	Industrial Development Strategic Plan
IPAP	Industrial Policy Action Plan
ISSP	Industrial Strategy Study Process
LIDI	Leather Industry Development Institute
MDGs	Millennium Development Goals
METEC	Metals and Engineering Corporation
MFI	Micro Finance Institutions
MIDI	Metal Industry Development Institute
MLE	Medium and Large Enterprises
MoA	Minstry of Agdiculture
MoCS	Ministry of Civil Service
MoE	Ministry of Education
MOFA	Ministry of Foreign Affairs
MoFED	Ministry of Finance And Economic Development
MOI	Ministry of Industry
MoM	Ministry of Mining

MoST	Ministry of Science and Technology
MoT	Ministry of Trade
MoWE	Ministry of Water and Energy
MLEs	Medium and Large Enterprises
NIPF	National Industrial Plan Framework
PASDEP	Plan for Accelerated Sustainable Development and Eradicating Poverty
PPP	Public Private Partnership
PPPE	Performance of Public Private Enterprise
R&D	Research & Development
R&D	Research and Development
REMSEDA	Regional Medium and Small Enterprise Development Agency
SDPRP	Sustainable Development and Poverty Reduction Program
SLOT	Strength, Limitation, Opportunity and Threats
SMEs	Small and Micro Enterprises
SOC	Social Overhead Capital
SOEs	State Owned Enterprises
STII	Science Technology and Innovation Institute
TIDI	Textile Industry Development Institute
TVET	Technical and Vocational Education and Training

Executive summary

This study has been conducted to provide industry development roadmap, a plan for its implementation and the necessary institutional set-up and governance framework that supports the industrialization and transformation process of the industry sector leading to the achievement of the national vision of becoming one of the middle income countries by 2025.

The document recognizes that Ethiopia's present economic dependence is primarily on an agricultural-based economy and underlines the fact that the country is also gifted with potentials of natural resources and markets that can be utilized through value addition for the benefit of the whole economy.

The study has also presented the status quo of the industry sector and identified major gaps and subsequently has tried to propose the way forward how to fill these gaps. Finally, it outlines future growth of the prioritized industrial sector targeting the country's vision of reaching to the middle income country level by 2025.

The overall objective of the study is to develop a document that shows the growth direction of the Ethiopian industrial sector, the strategic plan that provides strategies to realize country's vision of becoming one of middle income countries by the year 2025, and the necessary institutional setup and governance framework to speed up the pace of the industrial transformation process.

The study has followed standard study methods. The major data collection methods and tools include extensive document analysis, in-depth interviews, focus group discussions, workshops, and industrial zone visits (observation). The study has finally produced three deliverables as a final output of the study namely; an Industrial Development Roadmap, an Industrial Development Strategic Plan Document, and an Institutional Set-up and Governance Framework.

The objective of the Industrial development Roadmap is to show the growth direction of the industrial sector to realize country's vision of becoming one ofthe middle income countries by the year 2025. This roadmap believed to significantly contribute to the achievement of Ethiopia's vision and to sustain rapid and broad based economic growth. Thus, *the overall* National Development Goal envisaged in the planis *to fully eradicate absolute poverty and build a middle income country with full provision of basic needs*.

Comparison of the Ethiopian Economy with Model Middle Income Country (MMIC) in terms of key Socio-economic and Human Development Indictors shows a clear gap that has to be addressed within the coming 13 years if the country has to realize a vision of becoming a middle income country by the year 2025.

The share of the Ethiopia industry sector to GDP is lagging behind almost by 20 points from that of the Model Middle Income Country(MMIC). This implies that the share of the industry sector should have to increase by more than two folds to reach the MMIC target by the year 2025. The situation is not different in the case of the Ethiopian manufacturing sector which currently (2012) accounts for only 4% of GDP as compared to 17% of GDP ofthe MMIC.The deficit of the manufacturing sector is around 13% from that of the MMIC.

To overcome this deficit, distortion in the manufacturing sector has to be introduced by mobilizing available resource and allocating it to the sector so that the sector will ultimately achieve the targeted 17 % share of GDP by the year 2025. Such intervention is necessary to attain the vision of becoming one of the middle income countries by the year 2025.

To bridge the gap identified, selected economic growth targets (both macro as well as sectoral) has been set. The economic growth targets are estimated with three different scenarios namely; a GTP high case scenario, declining GDP growth rate scenario, and the GTP base case scenario.

The GTP high case scenario assumes that the GDP will annually grow by an average growth rate of 14.9 %. Under this scenario PCI is projected to reach 746, 1451, and 2877 USD by the year 2015, 2020, and 2025 respectively. VaryingGDP growth rate scenario assumes relatively higher growth rate at the beginning of the planning periods which is the characteristics of small economy and gradually declining as the size of the economy gets relatively larger and larger until the final year of the planning period. Under this scenario the PCI is estimated to be 671.7, 970.6, and 1380.1 USD by the year 2015, 2020, 2025 respectively.The study selected the GTP base case scenario which assumes that the GDP grows by an average of 11.2 % annually. Under this scenario, PCI assumed to reach 676.5, 1116.6, and 1880.2 USD by the year 2015, 2020, and 2025. Based on this scenario selected national growth targets are worked out.

Accordingly, the value of Gross Domestic Product (GDP) is targeted to be 59.85865 billion USD in 2015,110.680 billion USD by the year 2020, and finally targeted to reach to the level of 206.691.6 billion USD by the end of year 2025.The share of the industry sector in billion USD is also estimated in similar fashion. The industry sector targeted to contribute about 11.2, 24.8, and 56.5billion USD by 2015, 2020 and 2025 respectively. Moreover, the manufacturing sector which is one of the subsectors within the industry sector is gradually expected to take the Lion-share in the future and will contribute to GDP4.2 billion USD by the year 2015. However, the shock that will be introduced during the second and third phase assumed to induce the sector to jump up to 13.3 billion USD by 2020; and finally to 35.2 billion USD by the year 2025.

Currently (2012), the manufacturing sector accounts for 33 % of the industry sector. This share is targeted to increase to 37% by the year 2015, and finally attains 67% ofthe total industry sector by the year 2025.

Following, upgrading of the capacity of existing priority sectors coupled with their diversification in the coming 13 years along with the coming of new sectors, the contribution of the sector to the economy will increase substantially. The share of the manufacturing sector to the GDP is targeted to reach ultimately 17 % by the end of 2025. To ensure faster and sustained development of the industrial sector, favorable conditions shall be created for industry to play a key role in the economy.

To bring about manufacturing sector transformation five development directions are envisaged. These are;upgrading and capacity enhancement ofmajor priority industries, diversification of manufacturing sector to new sectors, enterprise cultivation, private and public investment, and Industrial zone development.Furthermore , the four strategic pillars on which the Ethiopian industry development depend are sustaining the manufacturing sector's contribution to industry and economic growth , ensuring balanced regional industrial development , integrating the Ethiopian industries into regional and global market and development , and pursuing both Export-Led and Import Substitution Industrialization.

The industrial development target envisaged above are planned to be attained in three developmental phases.

Phase one is a phase where effort will be made to enhance the productive capacity of the existing priority industries. The highest priority will also be given to the development of SMEs. The industrial targets set by GTP are the key targets to be achieved in this planning period.The significant percent of the manufacturing sector will remain in the light industries; however, their % share will gradually reduce. In this phase the share of the manufacturing sector to GDP expected to reach 7% by the end of year 2015.

Phase two is a phase where diversification in the existing priority industry takes place along with emerging of new key industries. In this phase, three new types of industries (ICT and Electronics, Petro-chemical industries, Bio-technology, and Packaging industries) are planned to emerge, whereas capacity building to develop new more industries like Knowledge-based

industries and Nano-Technology will be undertaken in this second phases. In this planning phase, distortion will be introduced to achieve rapid growth of the manufacturing sector. Along the building up of heavy metal and chemical industries; due continuous attention will continue to be given to major industries which are identified as priority sectors in GTP. The light industries will remain the largest component of the manufacturing sector; however, the % share of heavy metal and chemical industries will gradually increase. At the end of this phase, the share of the manufacturing sector to the GDP is targeted to reach 12%.
In phase three the newly built heavy metal and chemical industries will further expand and build their capacity and high-techindustries will be built up. Tapping potential to develop Knowledge-based industries and Nano-Technology will take place so that such industries will come up in the next stage of industrial development after 2025.The significant percent of the manufacturing sector will still remain the light industries in this phase as well; however the % share of heavy metal and chemical industries and high tech industries will gradually increase up to the vision period 2025. By the end of 2025, the industry shows significant structural change and the structure of the sector will consist of more than 50% of Medium & High-tech Industry. The share of the manufacturing sector to GDP will finally reach 17%.

The sector's contribution to the economy in terms of foreign currency earning will also improve from time to time. Accordingly, the foreign currency earning is targeted to be 2.6bil. USD by the end of year 2015. But it is expected to grow nearly by three folds (7.32 Bil. USD) in second phase and finally by eight folds (16.3bil USD) by the end of the third planning phase, that is, by the end of 2025.

The sector is also expected to significantly contribute to the new job creation effort of the country. During the year 2012 it has created 204 thousands new job. From this level, the new job that will be created by the end of 2015 will be increased to 236 thousands and to 377 thousands by the year 2020 and finally by the end of 2025 to reachto the level of 780 thousands. This an increase nearly by 330% as compared to year 2015. During the planning period the enterprise particularly SMEs shall be cultivated and gradually promoted to SME's. The targeted number of SMEs cultivated is 25, 40, and 65 thousands by the year 2015, 2020, and 2025 respectively.

The strategies, programs and detailed implementation plan how to achieve the targets is presented in the SPD. The necessary institutional set up needed to support the industrialization process is presented in a separate document called Institutional Setup and Governance Framework.

PART ONE: BACKGROUND

1.1 Purpose, objective, process, and methods of the study

Purpose of the Study

This study has been conducted to provide industry development roadmap, a plan for its implementation and the necessary institutional set-up that supports and leads the industrialization and transformation process of the Ethiopian industry sector leading to the achievement of the national vision of becoming one of the middle income countries by 2025.
The study recognizes that Ethiopia's present economic dependence is primarily on an agricultural-based economy. It also underscoresthe fact that the country is also gifted with both tapped and untapped potentials of natural resources and markets that can be addressed through value addition for the benefit of the whole country. It also takes into consideration that Ethiopia has a fairly limited skilled human and financial resource for the transformation of the industry sector to achieve the ultimate goal of becoming a middle income country by the year 2025. It is in this background that the study compiles to address critical issues grappling with the industrial sector to suggest prospects, strategies that would provide the sector with meaningful opportunities to realize its full potential of achieving a broad-based manufacturing capability that can efficiently support and lead the national economy.

To this end, the study provides a broader engagement framework direction and strategies within which all stakeholders, including the public and private sector; civil society and development partners will contribute and play their respective roles in industrial development.

On top of these, the studyshows what the industry sector should look like in a middle income country by taking into account the industrial structure of model middle income countries in the context of Ethiopian industry. It also presents the status quo of the manufacturing sector (with regards to industry structure, performance, production capacity, efficiency, effectiveness, market coverage, and industrial competitiveness, etc), and opportunities and challenges for the industrial development. The study in its different parts tries to clearly show the major gap identified and proposes the way forward to fill these gaps.

Finally, it outlines future growth of the prioritized industrial sector targeting the country's vision of reaching the middle income country level by 2025.

Objectives of the study

The general objective of the study is to develop a document that shows the growth direction of the Ethiopian industrial sector, the strategic plan that provides strategies to realize country's vision of becoming one of middle income countries by the year 2025, and the necessary institutional setup and governance system to undertake the industrial transformation process.The study'sspecific objectives are;

1. To develop the road map to transform the manufacturing industry to enable the achievement of the national vision 2025
2. To develop the strategic plan document that clearly depicts the implementation of the industrial development roadmap.
3. To develop the institutionalarrangement and the governance system needed to support and lead the industrial transformation process in the Ethiopian economy

Process of the study

The idea of developing an industrial road map for Ethiopian industry was generated by the discussion with the former ECBP and then with the MoI. Following these continual discussions, proposal was prepared and presented officially by ASTU to concerned stakeholders on official inception workshop for comments and suggestions on the idea of the roadmap as well as the process of developing the roadmap. Considering the feedback that were given on the inception workshop, the overall study organization and process was revisited and the development of the roadmap started.

The team of the study is mainly organized from different groups including the core study team having the Korean team, ASTU team as sub team and sector specific experts from the Ministry of Industry. The overall study has been conducted throughcollaboration of these teams and commented by the technical committee which is organized or established by Ministry of Industry that includes experts from various universities, professionals, sectors, ministries and well recognized persons.

Finally, by incorporating the comments from the technical committee the document is sent to the steering committee organized by ministry of Industry to include higher government officials for further comments and ideas in future strategic guidance.

Methods used

The study has followed standard study methods. The major data collection methods and tools include document analysis, in-depth interviews, focus group discussions, workshops, industrial visits and lessons learned from benchmarked countries.

Document analysis: the study has benefited from information and data obtained from the secondary sources. Different relevant policies, strategies, and programs of national and international documents were identified and thoroughly reviewed and accordingly used to enrich the study documents.

In-depth interview: In-depth interview was conducted with carefully selected strategic leaders and stakeholders including different ministries, agencies, corporations, chamber of commerce and sector associations, professional associations, foreign business forums, experienced experts and professionals from each sector and other relevant stakeholders including the private sector. Sixty one in-depth interviews were conducted out of which 44 of them were at the sector level and the remaining 17 of them were at the macro level with pertinent Ministers, State Ministers, Directors, and other pertinent high level officials. (refer annex 3)

Focus Group Discussion: Focus Group Discussion was held with selected participants who had strategic influence and important contribution to the development of the road map and other related documents. It was used as a primary data collection method about the current business environment and status of the manufacturing Industry. The participants on the focus group discussions include Core Sectoral Directorates and experts in Ministry of industry, public and private sector actors in industrial development, Industry owners, managers technical staffs from each sector. A total of14 Focus Group Discussions were conducted. In the Focus Group Discussions 114 individuals have actively participated in the discussion forum (refer annex 3).

Workshop: workshops have been organized by the study team to get feedback from concerned stakeholders and the comments and feedbacks obtained during these different workshops have been usedto enrich the study. A total of three workshops have been conducted. One of the workshops was with the Ethiopian public higher education representatives with the objective of creating awareness about the current study. From this workshop valuable inputs have been obtained for the benefit of the study. The remaining workshops were organized to get feedback from relevant stakeholders participants of which were representatives from different Ministries, MOI institutes, directorates, and private sector representatives.

Observations and Visit: Valuable information has been collected through personal observation of different industries and industrial zone/complex visits in two selected countries.The study team members have conducted a ten daysexposure and experience sharing visit to china industry provinces. This visit enabled the study team members to get insight on the development of industry zones and its governance system along withrelated different support service packages needed to be established in the development zone. Selected members of the steady team have also conducted a seven day working and experience sharing visit to South Korea and used the lesson learned to further enrich the study.

Lessons learned from international best practices: The Roadmaps, Strategies, industrial policies, and Institutional Setup for accelerated industrial development of other fast developing economies were also reviewed to draw important lessons and adapt to the Ethiopian industrial scenario.

Deliverables of the study

As an output of the study three deliverables are produced. These are;

1. An Industrial Development Roadmap,
2. An Industrial Development Strategic Plan, and
3. An Institutional Set-up and Governance Framework

These deliverables are presented in three different documents. This document presents the first deliverable, the Ethiopian Industry Development Roadmap.

1.2.Over view ofindustrial growth achievements and challenges under PASDEP

At the beginning of the PASDEP i.e. at the end of Sustainable Development and Poverty Reduction Program (SDPRP); the share of the industrial sector including manufacturing, construction, hydropower, and mining, has not exceeded 14% of GDP on average; of which the manufacturing sub-sector (cottage industry, small and micro enterprises and medium and large scale manufacturing industries) accounts for 5.5% of GDP on average. The average share of manufactured products to total exports does not exceed 5% of GDP on average as well.

The main focus of the programs related to industry sector under PASDEP(2005/6 - 2010) was on strengthening of the small scale manufacturing enterprises as they are the foundation for the establishment and intensification of medium and large-scale industries. The small scale manufacturing also had opened the opportunity for employment for those who had not engaged in other sectors in addition to serving as alternative/additional income source for those involved in agriculture.

The country's achievements in the area of industrial policy support during the PASDEP period are:

- Policy supports were designed and implemented
- Huge Infrastructure development projects were implemented
- Six Priority sectors are selected and are given top priorities in all aspects
- Export steering committee is established to monitor and evaluate the performance of the priority sectors and to give policy directions
- Industrial policy toolkit like; benchmarking, business match making, twining, etc. are designed
- High-level TVET and Science and Technology University programs are designed and implementation to address HR requirement is started.
- Development centers and training institutes like, LIDI, TIDI, MIDI, and MDTI are established

During the PASDEP period, even though a substantial increment of GDP share of the total industry sector was registered, there was no significant growth in the manufacturing industry sector, which had motivated to do more to increase the share of industrial sector contribution in GDP. The major challenges encountered in the industry sector during PASDEP period include:

- Availability of raw material
- Inadequate human resource capability, such as technical and managerial skills,
- Shortage of foreign exchange to import important raw materials, spare parts and other inputs
- Electrical power supply disruption;
- Constraints of access to efficient and effective credit and other services.

Based on the achievements marked in policy capability building and the lesson learned from its limitations during the PASDEP period, the Ethiopian Government had entered to the next five year Growth and Transformation Plan where the industry contribution to the national economy will be enhanced and the ground for its leading role will be established.

1.3Industrial Growth Achievement in the first two years of the GTP

The industrial sector is one of the envisioned sectors expected to play a great role in GDP growth, job creation, foreign exchange earnings, and SMEs developmentin the GTP period. Particular emphasis is given to the promotion of micro and small enterprises as well as supporting the development of medium and large scale industries. Industry zones development and Public Enterprises Management and Privatization are also the focus of GTP in industry development of the country. These Industrial Development strategic directions for which policy support was provided focused on industries which are labor intensive and having wide market,broad linkages with the rest of the economy; use agricultural products as input,export-oriented and import substituting,and industries that can contribute for faster technology transfer.

In light with the aforementioned directions, several activities were carried out in the last two years (2003 EC and 2004 EC (2011 and 2012 GC)) of GTP period. The performance of the sector during these fiscal years under review is presented as follows.

Table 1 *Growth rate of real GDP (2009/10-2012)*

Sector	Base year (2009/2010)	2010/11 Fiscal year Plan	2010/2011 Fiscal year Performance	2011/12 Fiscal year Plan	2011/12 Fiscal year Performance
Overall real GDP	10.6	11	11.4	11.4	8.5
Agriculture and allied activities	7.6	8.5	9	8.5	4.9
Industry Sector	10.8	14	15	16	13.6
Service Sector	13.2	11	12.5	11.1	11

Source: MOFED(2012)

During the GTP period, it is assumed that the agricultural sector will continue to be the major driver of economic growth. However, in 2011/12 its performance was not as expected. Rather ithas fallen to 4.9 % from the planned 8.5% growth rate. The decrease in the growth rate of agricultural sector is the major source of decline in the GDP growth rate to 8.5 % in year 2011/12 (2004 E.C)

Although Ethiopia’s industrial base is still relatively small, the growth prospects of this sector are significant in the last two years GTP period, as new industries and projects are planned in such areas including steel, chemicals and pharmaceuticals. A number of factories are currently under construction. This momentum is continuinggiven the priority accorded to industrialization, both for export promotion and import substitution, in the government’s five-year GTP.

During 2010/11, real GDP growth rate stood at 11.4 percent, which is well above the target and previous year performance by 0.4 percent and 0.8 percent respectively. In 2011/12 the GDP growths also continue to grow at 8.5%.This rapid growth rate of real GDP reveals the availability of far-sighted macro economy and sectoral policies and indicates that Ethiopia is in a proper track to achieve the targets set in the GTP. The growth rates of the GDP by major classification during the period under review indicates that the industry sectors has registered high growth rate of 15 and 13.7 percent, in 2010/11 and 2011/12 respectively. Accordingly, the share of manufacturing to real GDP averaged 4 percent in 2011/12.

Table 2: *Distribution of GDP by Major Sectors*

Sector	2009/2010 (Base year)	2010/2011	2011/12
Agriculture Sector (%)	42	45.6	44
Industry Sector (%)	13	10.6	11.1
Service Sector (%)	45	44.5	45.6
Total GDP	100	100.7	100.7

Source: MOFED (2012)

When compared in terms of the share of GDP, the contribution of agriculture declined from 45.6 percent in 2010/11 to 44 percent in 2011/12 while the share of the industry increased from 10.6 percent in 2010/11 to 11.1 percent in 2011/12. During the same fiscal years, the share of services sector increased from 44.5 percent in 2010/10 to 45.6 percent in 2011/12. The figure below shows the trend in sectors contribution to the GDP during the first two GTP periods.

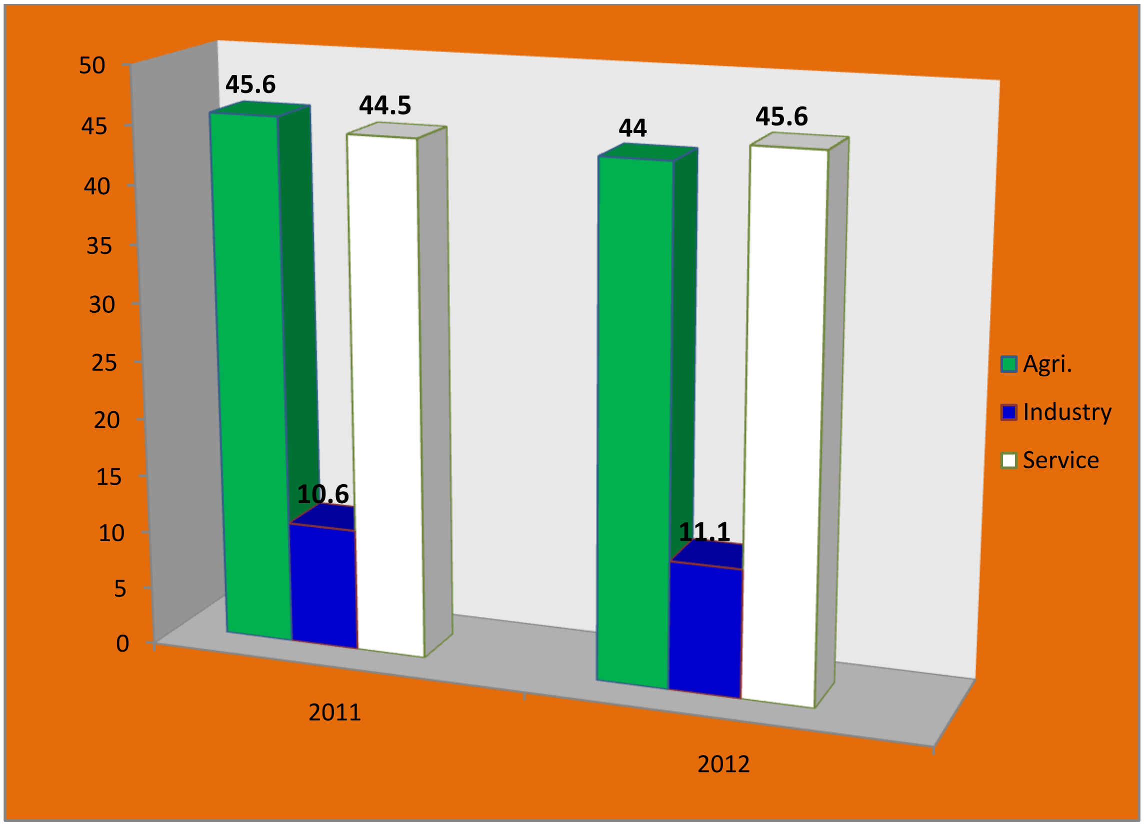

Figure 1: **Share of major sectors to GDP during the first two GTP period**

1.3.1 Performance of Small and Micro Enterprises (SMEs)

The GTP envisions ensuring rapidly and sustained development of the industrial sector and enabling the sector to gradually play a key role in the economy. To this end, particular emphasis is given to the promotion of micro and small enterprises (MSEs) as well as supporting the development of medium and large scale industries.

The MSEs enterprises are booming in different parts of the country and expected to produce industrial products which are competitive in domestic market and started to play crucial role in the industrial development. These enterprises created job opportunity for1.148 million unemployedyouths and women, which reduces urban unemployment rate from 18 percent in 2010/11 to 17.5 in 2011/12 fiscal year.

The government allotted 1.015 Billion birr in order to strengthen the capacity of SMEs and to resolve their financial constraints .Trainings were also offered for SMEs members in different thematic areas like business management, entrepreneurship, technical and vocational training areas. Moreover, 5000 hectare of production area, 1757 shades and 46 buildings were constructed and offered for SMEs.

Table 3: ***Summary of achievements in SME development***

Indicators	2010/2011	2011/2012
Training	453,511 (employees)	15,106 (Trainers)
Land(hectare)	452	5000
Shades	1463	1757
Building	71	46
Loan(million Birr)	983	1,015
Job created	541,883	1,148,000
Women share of jobs (%)	53	40
Urban unemployment (%)	18	17.5

Source: GTP Performance report 2010/11 and draft 2011/2012(MoFED)

1.3.2Manufacturing Sector Performance

In the last two years of GTP, the government strived to enable the Medium and large scale manufacturing industrial sector to play its role in assuring rapid and sustainable technological development so as to make the economy more competent, resolve the shortage of foreign currency and support the progress of SMEs and agricultural sector.

Table 4: ***Export performance of Industrial Sector (2011/12) / Million –USD/***

S.N	Subsector	2010/11 performance	2011/12		Relative performance (%)	
			Plan	Performance	2010/11Plan	2011/12Performance
1	Textile and Garment	62.22	171.37	84.63	73.1	49.4
2	Leather and Leather Products	104.34	206	112.06	57.8	54.4
3	Agro-processing	34.45	82	51.75	42.8	63
4	Chemical and Pharmaceuticals	6.91	11.92	7.01	96	58.7
Total		207.9	471.3	255.4	58.8	54.2

Source: MOI– 2011/12

In 2011/2012, it was planned to generate a total of 471.3 million USD in foreign exchange earnings from the manufacturing industry; but the total amount generated was only 255.4 million USD during the fiscal year indicating a 54.2 percent achievement of the target and annual growth rate of 22.9 as compared to the 2010/11 fiscal year.

Further disaggregation of the performance of the sub-sector indicated that textile and garment industries attained 49.4 percent of its plan of 2011/12 while in 2010/11 the achievement of the plan was 73 %. Similarly the relative performance of other subsectors as compared to the plan shows declining trend. The Leather and leather products, agro – processing, and chemicals and pharmaceutical industries performance were 54.4 percent, 63 percent and 58.7 respectively

In absolute terms, the foreign exchange earnings 2011/2012 seem better than that of 2010/2011. Nonetheless, the aggregate and sub-sectoral performances all fall short of the target for the fiscal year. This shows that the manufacturing sector performance as a whole needs special attention and commitment to overcome the backlog of the past two years'performance and to meet the ultimate goal of the Manufacturing Sector (17 %) by 2025.

As envisaged by the GTP, the role of the sub sector should be significant enough to bring about structural transformation in the economy and to acceleratethe process of industrial development. Thus, it is critical to drastically improve the performance of the manufacturing industry in the near future and increase the GDP share of manufacturing sector from the current 4% to 17% by the year 2025.

In this regard, it is crucial and urgent to take extraordinary measuresin the structural problems of technologicalcapability, additional investment, market development, input and raw materials supply, skill upgrading of both the critical mass and the industrial leaders and appropriate institutional arrangementare fundamentally addressed in order to achieve the sectors GTP targets.

During the past two years GTP implementation period, in order to assure the role that the industrial sector is expected to play,a number of capacity building activities were undertaken and institutional arrangements were set;such as a cabinet ministerial office responsible for manufacturing industry was established following the reorganization of government implementing offices in 2010/2011. Institutional capacity building, benchmarking, twinning and Kaizen programs were implemented in the year 2011/12. Four new and four expansion projects in textile, eight projects in leather investment, ten agro-processing projects and three projects in pharmaceuticals and chemical were supported and supervised.

Corporate governance system was put in place to support, monitor and evaluate the performances of public enterprises management and privatization. In addition, directives and regulations are developed and follow-up of their implementation has been strengthened. Improvements in the public enterprises are manifestedin capacity utilization, sales revenue and profit and export performance of the enterprises as depicted in the table 5.

Table 5: *Performance of Public Enterprises*

SN.	Major activities	Base year (2010/11)	2011/12 Fiscal year		Difference from base year in percent	
			Planned	Actual	2011/12 plan	2010/11
1.	Value added amount (billion ETB)	3.2	3.97	2.4	60.5	(25)
2.	Capacity utilization (percentage)	78.0	98.0	82	83.7	5
3.	Profitability before tax(billion ETB)	2.6	4.06	2.0	49.0	(23)
4.	Export earnings (Million USD)	72.4	76.2	61.5	80.7	(15)

Source: MoFED-2012

The GTP also emphasizes the establishment of industrial zones in different parts of the country. Accordingly, the industrial zone development plan was designed and being implemented. Infrastructures are built in order to create market linkages. The construction of the Eastern Industrial Zone at Dukem is about to be completed, while the Ethio-Turkish Industrial Zone and the Kombolcha textile cluster are a bit lagged due to the absence of preparation from the investors' side. Efforts are under way to speed up the implementation through close supervision and support. Addis Ababa, Kombolcha, Diredawa and Hawassa are the four main selected towns for industrial development in which 3735 hectares of land is already reserved by their respective city administrations for the construction of industrial zones.

Limited capacity of government implementing bodies and coordination of support-providing government institutions, shortage of industrial inputs, and limited initiation of private investors to involve in the manufacturing sector, sluggish involvement in practical investment are among the challenges in the past two years**.** Moreover, low levels of technological and managerial capacity of factories, productivity and technological capacity limitation, inefficient logistic system, inability to cope up with fierce global competition interms of quality and price was also the persistent challenges of the sector.

PART TWO:OBJECTIVE, PHILOSOPHY, AND PILLARS OFINDUSTRIAL DEVELOPMENT

2.1 Objectives of the Ethiopian Industrial Development Roadmap

The general objective of the road map is to show the growth direction of the industrial sector to realize country's vision of becoming one of themiddle income countries by the year 2025 and has the following specific objectives.

- To attain industrial structural transformation in the economy
- To deepen and diversify the industry base by enhancing the manufacturing capacity
- To ensure the contribution of the manufacturing sector sustaining 10.3 % GDP average growth of the economy
- Set industrial development direction to enhance the local and foreign investment

2.2Philosophy and Pillars of Ethiopian Industrial Development

The Industrial Development Strategy of Ethiopia clearly formulated the following Industrial Development Philosophy where the emphasis is given to the mutual role of Government and private sector in the industrial development process.

- System of free market economy with active government involvement and support
- Government sets strategic and development directions for the whole economy, and ensures the achievements of socio-economic goals.
- Private sector is free to operate and will be given appropriate policy, institutional and infrastructural support

Industrial Development Key pillars

The following strategic pillars have been outlined which are categorized in broad continuums as development Initiatives; promotion of growth areas and enhancing the enabling environment which will root to in four strategic pillars.

i. **Sustaining the manufacturing sector's contribution to industry and economic growth**

The manufacturing sector will continue to be one of a major source of growth. The priority industry sectors which are working as export oriented and import substitution will be supported to enhance their productivity, upgrading and diversifying their products and markets. Due attention will be given for job creation and environmental sustainability during the industrial development process. The shift towards higher value-added products and activities, and appropriate technology and capital-intensive activities will be accelerated, through encouraging greater investments in these areas. The policy and strategic supports will be provided to achieve the industrial transformation in the year 2025 where the industry share to national economy will be significant and to the level of middle income countries.

ii. Ensuringbalanced regional industrial development

To provide a coordinated support for the growth of industrial development the strong institutional linkage between the federal government and regional states will be enhanced. The industrial development will be supported to un-tap the resources across the regions and make them beneficial of the development. The growth which will be generated by industrial development will provide opportunities for further alleviation of poverty and raising the incomes of the lower income groups through employment, as well as contributing towards more balanced regional growth.

Adequate Regional support will be provided to enhance the development of small and medium enterprises SMEs, as the main catalyst of industrial growth of the nation. Expansion of enterprises along different regions will be facilitated with minimum effort of the industrialists.

iii. Integrating the Ethiopian industries into regional and global market and development arena

The national industries will be assisted and supported to take advantage of opportunities, arising from the growing trend towards economic integration at the regional and global levels. The regional and international business agreements will be tuned to enhance the competitiveness of local industries in regional and global markets.

Companies will be supported to focus on their core competencies and strengthen to be more competitive in the regional and global markets. Collaborations between SMEs and MLEs and Ethiopian industries with bench marked industries operating outside Ethiopia will be institutionally facilitated. The promotion of FDI will help the local industrialists to gain market access, technology transfer and improve their competitiveness. All round support will be provided to promote champion products in the globe and to bring the country as the regional hub for selected products and services.

iv. Pursuing both Export-Led and Import substitution Industrialization

To attain rapid industrial development, industry should produce, following the direction led by agriculture, inputs and goods suitable for agriculture, market agricultural products after adding value to them. By ensuring large foreign exchange earnings by exporting more products in global markets, we can also ensure rapid industrial development by importing the production equipment that we need.

Since large and reliable markets for value added agricultural products are available abroad, the pace and path of our industrial growth is determined by successfully exporting to these foreign markets. The capability for competitiveness in the world market will be transferred in one way or another to other sectors by strengthening export industries.

Currently, the country's import outweighs the export by a huge amount. It is evident that the gap between the two is increasingly widening from time to time in favor of imports. Accordingly,the focus will be given to strategic import substitution areas and invest heavily to address the trade deficit issue, andcross cutting support will be given to the industries who are working on import substitutions. The productivity and competitiveness of industries on import substitution direction will be enhanced. Broadening of the input base of local industries will be supported so that the export oriented industries also work by minimizing their dependence on imported industrial inputs.

PART THREE: NATIONAL DEVELOPMENT VISIONS, GOALS, AND TARGETS

National Vision

Ethiopia's Vision 2025

> ***"…….to become a country where democratic rule, good-governance and social justice reign up on the involvement and free will of its peoples, and once extricating itself from poverty to reach to the level of a middle-income economy as of 2025" (GTP 2010)***

Economy Vision

> ***"…building an economy which has a modern and productive agricultural sector with enhanced technology and an industrial sector that plays a leading role in the economy, sustaining economic development and securing social justice and increasing per-capital income of the citizens so as to reach the level of those in middle-income countries" (GTP 2010)***

3.1. National Development Goals

This industrial development road map (2013-2025) will contribute for the achievement of Ethiopia's vision and to sustain rapid and broad based economic growth. The experience nurtured in resolving challenges that arose during, and lessons learned from the implementation of the PASDEP and midterm performance of GTP were the starting point for formulation of the roadmap 2025.

Thus, *the overall goal of the plan over the two 5 years period* ***is tofully eradicate absolute poverty, build a middle income country withfull provision of basic needs,and build up dynamic growth engine***

3.2. National Development Targets

3.2.1 Middle income country economic and industry structure

There are a number of variations of definitions and criteria to ascribe what a middle-income country is and also the type of structural transformations required to achieve such a status. The low, middle and high-income categories are World Bank operational lending categories. A country's status is determined based on its Gross National Income (GNI) per capita in US dollars, using the Atlas method of currency conversion. The categories are divided as follows: low income, $995 or less; lower middle income, $996 - $3,945; upper middle income, $3,946 - $12,195; and high income, $12,196 or more. However, another way to compare incomes in different countries is to use Purchasing Power Parities (PPPs) as to account for differences in price levels between countries.

Researchers in the International Growth Centre (IGC, 2012) developed a pragmatic model that could help developing countries in attaining growth and structural transformation required to reach the middle income country status. The approach entails the analysis of the structure of the economies that have entered into the middle-income country category, and draw lesson as to apply it to specific country situations. Based on the World Bank Development database indicator (WDI, 2010), the model listed out all countries that passed the middle income threshold since 1960. The identification of these countries helps to make analysis of the economic structure of these countries against Ethiopia. These comparator countries are further short listed by considering such factors as to the similarity of the features of the countries with a particular developing African country, countries with greater than a million population, fluctuating economies, and other criteria. Further countries were categorized into oil-resource based and non-oil resource based growth countries. Once the list of countries is identified, a set of socio - economic variables were selected to benchmark at the year of their transition to the middle income country. The averages of these variables formed the expected structure of a typical Model Middle Income Country (MMIC) (Refer Annex 2).

The comparison between the MMIC and Ethiopia with respect to the selected key macroeconomic, and human and social development variables are depicted in Table 6. The gap between the MMIC and that of Ethiopia provides an indication of the structural transformation necessary to achieve the middle income status in 2025.

From table 6 we can clearly see the gap between the Ethiopian economy and the MMIC. If we focus only on the industry sector, the share of the industry sector to GDP is lagging behind almost by 20 points from that of the MMIC. This implies that the share of the industry sector should have to increase by more than double to reach the MMIC target by the year 2025. The situation is not different in the case of the Ethiopian manufacturing sector which currently (2012) accounts for only 4% of GDP as compared to the MMIC17% of GDP. The deficit of the manufacturing sector is around 13% from that of the MMIC. To overcome this deficit distortion in the manufacturing sector has to be introduced by mobilizing available resource and allocating it to the sector so that the sector will ultimately achieve the targeted 17 % share of GDP by the year 2025. Such intervention is necessary if the country has to attain the vision of becoming one of the middle income countries by the year 2025.

Table 6 *Key Macroeconomic Indicators*

Key Macroeconomic Indicators									
	Agriculture (% of GDP)	Industry (% of GDP)	Manufacturing (% of GDP)	Services (% of GDP)	Exports (% of GDP)	Imports (% of GDP)	Gross fixed capital formation (% of GDP)	FDI net inflow (% of GDP)	Gross domestic saving (% of GDP)
MMIC	20.7	30.7	17	48.6	30.5	37.4	26.6	4.5	21.6
Ethiopia (2012)	44	11.1	4	45.6	14	32.1	NA	NA	16.5
Gap	**+ 21.3**	**-19.6**	**-13**	**-3**	**-15.5**	**-5.3**	**-**	**-**	**-5.1**

Source: International Growth Center (2012) and survey data

Table 7: *Key Human and Social Development Indicators*

	Employment in agriculture (% of total employment)	Employment in Industry (% of total employment)	Rural Population (% of total population)	School enrollment, secondary (% Gross)	Electric power consumption (KWH per capita	GINI index	Poverty gap at $1.25 a day (PPP) (%)	Population Growth (Annual %)
MMIC	41.2	20.5	62.3	46.5	403.7	38.9	5.3	2.2
Ethiopia (2012)	80	5	85	38.4	3.36	29.8	NA	2.4
Gap	**+38.8**	**- 14.5**	**+22.7**	**-8.1**	**-399.3**	**- 9.1**		**+0.2**

Source: International Growth Center (2012) and survey data

Comparison of the Ethiopian Economy with MMIC in terms of key Human and Social Development Indictors is presented in Table 7. Accordingly, the gap in each of the indicator is evident. Much is expected from the manufacturing sector and from the planned industrial zone development to bring about structural change in the economy thereby narrowing the gap during the planning period -that is by the year 2025.

3.2.2 Development Targets

The table below summarizes some selected national development targets which are estimated using the information obtained from Ministry of Finance and Economic Development and estimated by the study team using this information.

The Ethiopian economy is targeted to grow annually at the average rate of 11.2 per cent during the planning period (2013-2025). This is in accordance with the Growth and Transformation Plan of the Ethiopian Government which assumed to maintain at least an average real GDP growth rate of 11.2 %.

Table 8: ***Projection of selected Macro variables (2013- 2025)***

	2013	**2015**	**2020**	**2025**
GDP Growth Rate (average 11.2%)	11.2	11.5	11.3	10.8
PCI in USD	568.1	676.5	1116.6	1880.2
PCI growth Rate (%)	9.3	9.9	10.8	11.07
Population Growth Rate (%)	2.44	2.44	2.26	2.05
Agriculture Share to GDP (%)	38.17	36.38	34.09	32.67
Industry Share to GDP (%)	15.25	18.73	22.37	27.33
Share of the manufacturing sector to GDP(%)	5	7	12	17
Service Share to GDP (%)	46.58	44.88	43.54	40.01
Poverty head count (%)	24.4	22.2	16.7	11.1

Source: MoFED and estimated based on information obtained from MoEFD

The economic growth targets are estimated with three different scenarios.The first scenario (the scenario selected) is the GTP base case scenario which assumes the average rate of growth of real GDP to be 11.2%. Under this scenario the population expected to grow at the average rate of 2.3% and owing to appropriate population management policy, the population growth rate will annually decrease by 20%. In year 2013 population of the country is estimated to be 84.3 million. Scenario two, the GTP High Case Scenario assumes that the GDP will annually grow by 14.9 %. Under this scenario PCI is projected to reach 746, 1451, and 2877 USD by the year 2015, 2020, and 2025 respectively. The third scenario is declining GDP growth rate scenario which assumes relatively higher growth rate at the early stage of economic growth and development which is the characteristics of small economy and gradually declining as the size of the economy gets relatively larger and larger. Under this scenario the PCI is estimated to be 672, 971, and 1380 USD by the year 2015, 2020, 2025 respectively.

The underlying assumptions to selectthe study scenario are:

- Conducive macro environment created during PASDEP and GTP period will be maintained and hence the growth momentum will continue afterthe first GTP period.This enables to attain an average economic growth rate of 11.2% for the coming 13 years as well.
- The model middle income economic structure depicts that the share of the manufacturing sector to GDP need to grow from the current 4% to 17%. This selected scenario ensures the growth of the manufacturing sector to the targeted growth level.
- The country vision targets GDP per capita of 1000 USD as a threshold to be attained by the year 2025. The selected (GTP base case) scenario will ensure 1880 USD GDP per capita by the end of the planning period. This amount of GDP per capita considers the future probable upward shift of the Middle income threshold level.

In general, thebasic assumption that the Ethiopian economic performance beyond 2015 will remain relatively the same appears plausible. Thus, extrapolating the GTP growth rate beyond 2015 is found to be logical.

Therefore, on the basis of the above underlining assumptions, the study selected the first scenario (GTP base case scenario). Accordingly, GDP per capita (PCI) is estimated to be 677, 1117, and 1880 USD by the year 2015, 2020, and 2025respectively. Based on this scenario selected national growth targets are worked out.

For the sake of comparison GDP per capita (PIC) projectionsunder these three different scenarios arepresented in table9followed by the figure showing the growth path of the three scenarios.

Table 9: *PCI Growth at three different growth cases (scenarios)*

Growth Scenario	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
GTP base case scenario (11.2%) PCI in USD	561.8	615	677	745	823	910.4	1008	1117	1238.1	1374	1525	1693	1880.2
GTP high case scenario (14.9%) PCI in USD	579	657	746	850	970	1108	1267	1451	1662	1905	2185	2507	2877
Declining GDP growth rate scenario (10.13% PCI in (USD)	568.	617	672	723	779	838	901	971	1045	1124	1207	1293	1380.1

Source: Computed based on secondary data obtained from MoFED

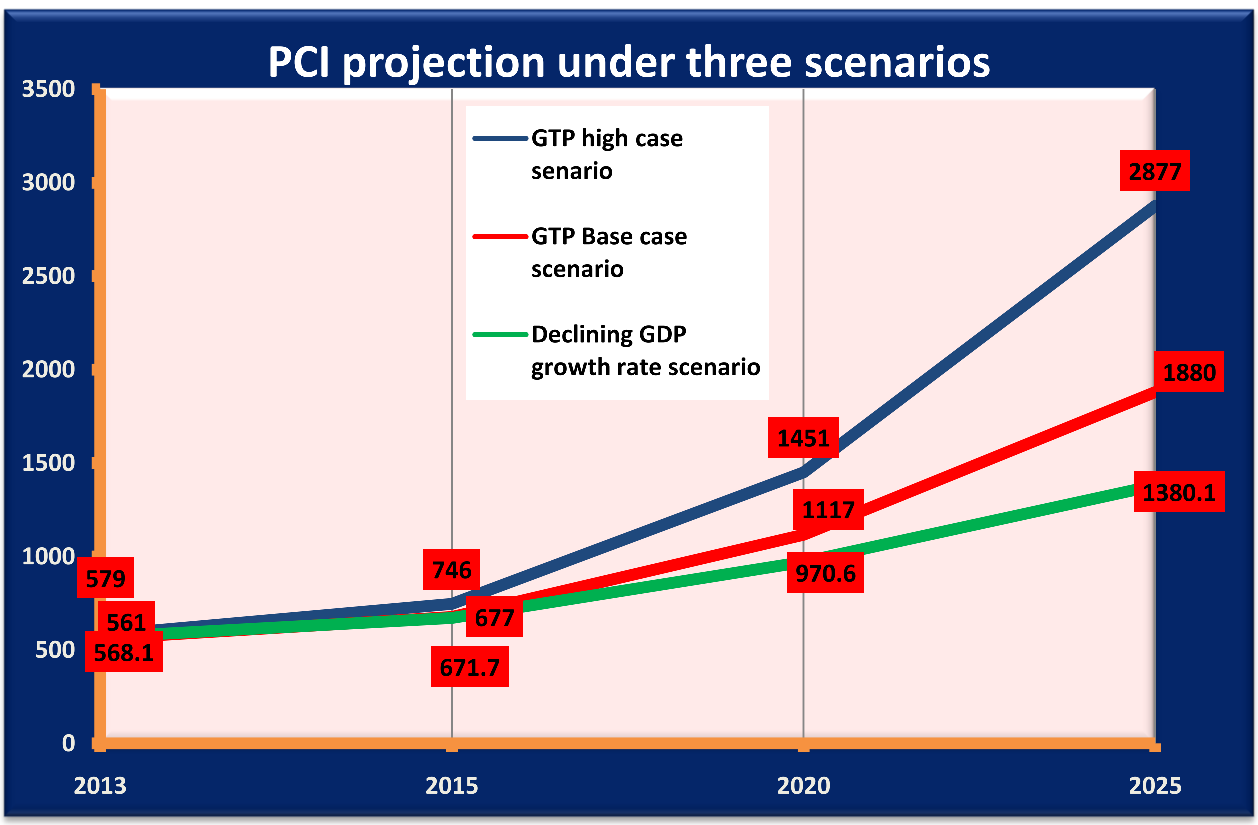

Figure 2: Target PCI at three different growth rate assumptions

National target of Industrial sector

The GDP growth as projected under the selectedscenario is targeted in 2015, 2020, and 2025 to be about 59.9, 111, and 207billion USD respectively. Out of the targeted GDP of each milestone the total share of the industry sector in billion USD is targeted to be11.2, 24.8 and 56.5 by 2015, 2020 and 2025 respectively. Moreover, the manufacturing sector which is one of the subsectors within the industry sector is gradually expected to take the Lion-share in the future and will contribute to GDP 4.2 billion USD by the year 2015. However, the shock that will be introduced during the second and third phase assumed to induce the sector to jump up to 13.3 billion USD by 2020; and finally to 35.2 billion USD by the year 2025, as depicted in figure 3.

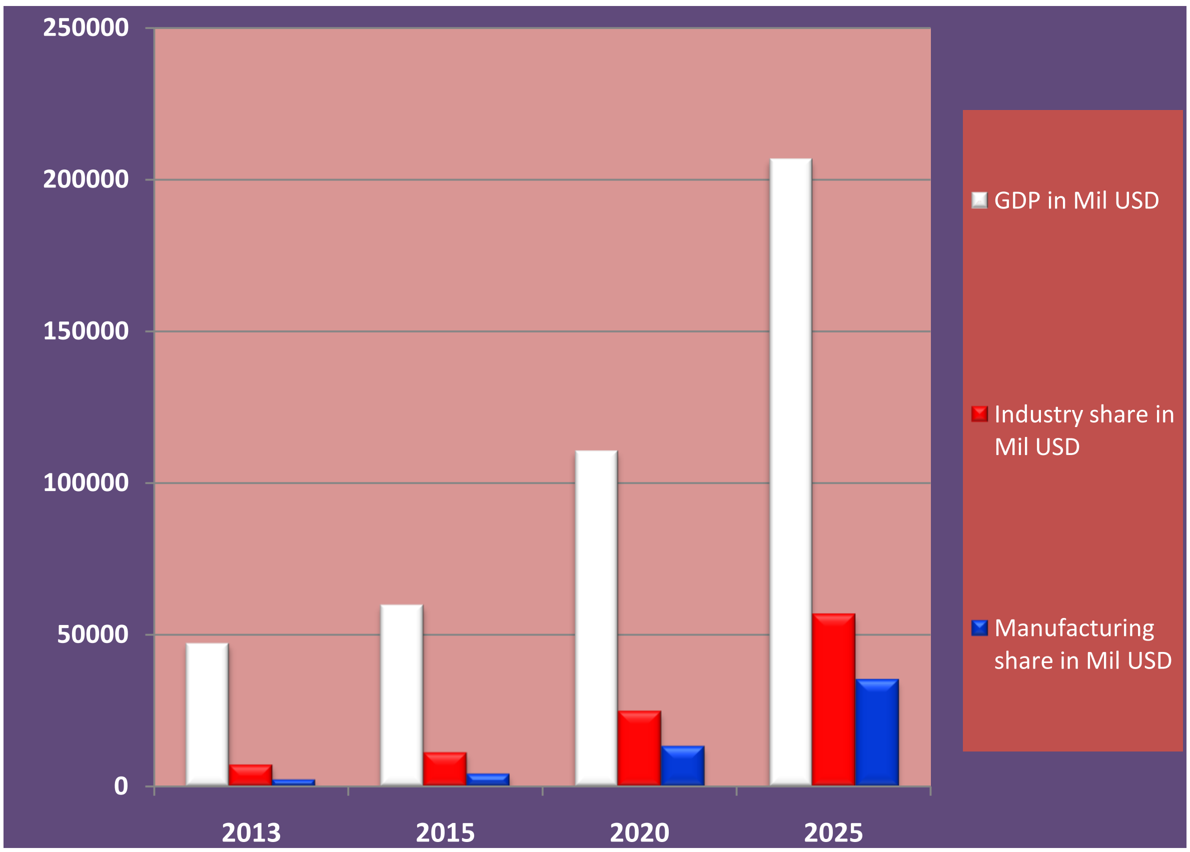

Figure 3: Target share of Industry and Manufacturing sectors to the target GDP

Economy structure

Currently the economy structure is dominated by service sector with the average GDP share of nearly 45% followed by Agriculture with the share of 44%. The industry sector contribution is the least of all with only 11% of the real GDP. If the industrialization goal and the vision of becoming a middle income country by the year 2025 has to be realized such trend has to be changed by introducing appropriate distortionsor shocks in economy through the provision of extraordinary support to the industry sector. With this in mind, it is targeted that the industry sector will make up to 19 % of GDP by 2015, 22.4 % by 2020 and finally expected to reach 27% of GDP by the year 2025 while the share of other sectors to the GDP for each milestone would proportionately decrease in favor of the industry sector, as indicated in the bar chart below (figure 4).

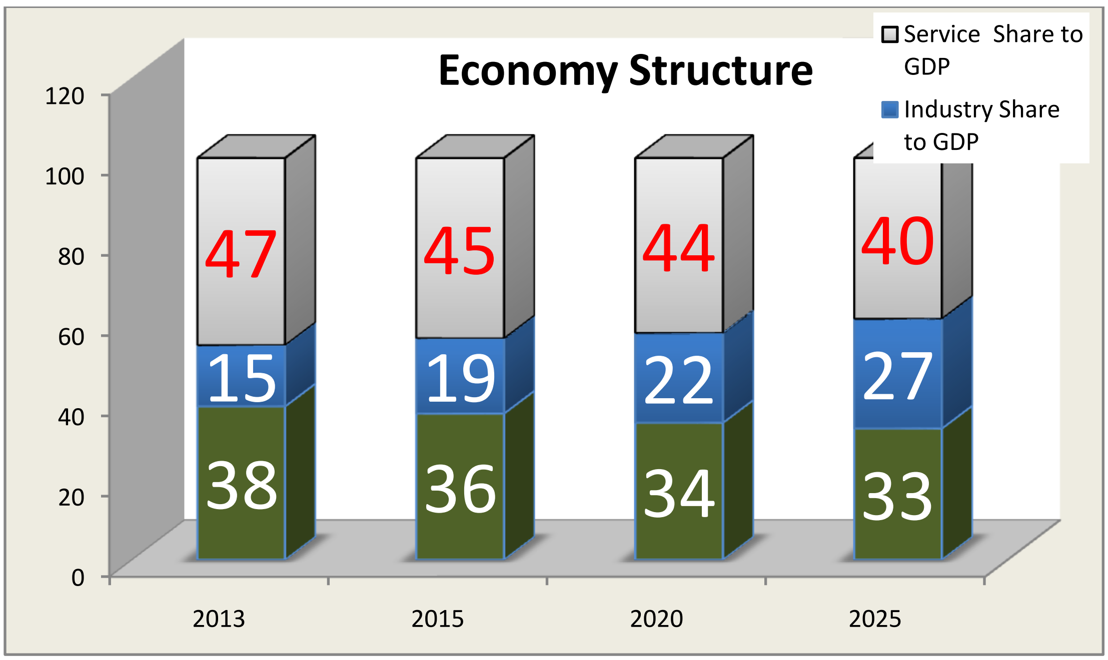

Figure 4: Structure of the economic sector at the end of year

In general by 2025, the industry sector will be 27%, Service sector will be 40%, and the agriculture sector will finally be below 33% of the economy (GDP). The ultimate 27% increase of the industry sector is based on the assumption that the-would be intervention recommended by this study (upgrading and expansion of priority Industry sectors) will enable the sector to reach this level. The contribution of the three sectors to GDP in terms of million USD is presented below in the table 10

Table 10: *Contribution of economy sector to GDP (in mill USD)*

Sector share to GDP	End of phase year			
	2013	**2015**	**2020**	**2025**
Agriculture	18048.43	21776.58	37730.8	67526.15
Industry	7210.862	11211.52	24759.11	56488.81
Service	22025.05	26864.56	48190.06	82697.31
Total GDP	47284.34	59852.66	110680	206712.3

Source: Computed based on information obtained from MoFED.

Manufacturing share of the industry sector

Currently (2012), the manufacturing sector accounts for 33 % of the industry sector. Using the industry growth rate projection of MoFED (2013-2025), the share of the existing manufacturing sector in the industry is targeted to be 37% by the year 2015, and finally attains 67% by the year 2025.Following,upgrading of the capacity of existing priority sectors coupled with theirdiversification in the coming 13 years along with the coming of new industries in the sector, the contribution of the sector to the economy will increase substantially. As projected in the national target, the share of the manufacturing sector to the GDP will reachultimately 17 % by the end of 2025as depicted in the figure 6.

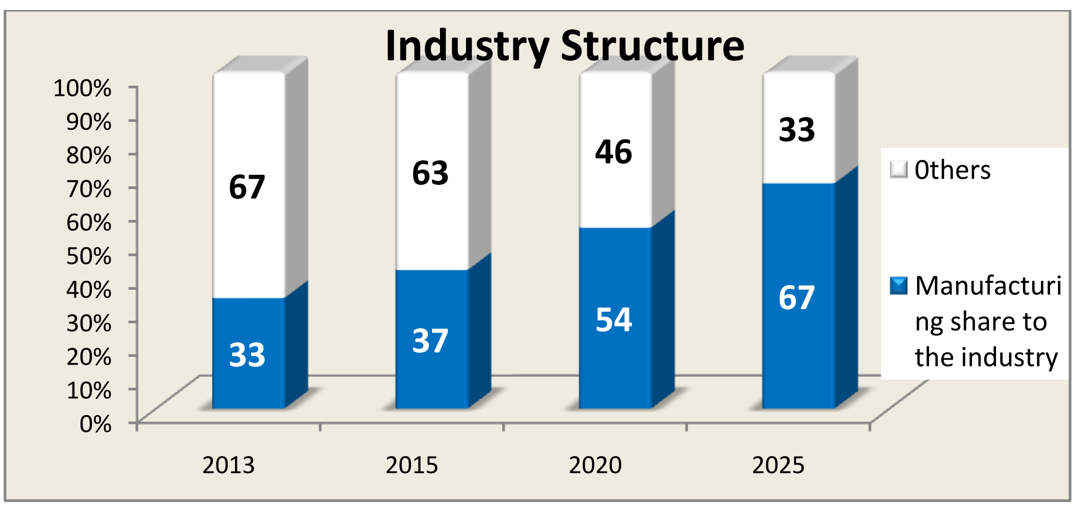

Figure 5: Share of manufacturing sector in the industry sector

PART FOUR: INDUSTRIAL DEVELOPMENT VISION, DIRECTIONSTRATEGIC OBJECTIVES, AND DEVELOPMENT PHASES

4.1. Industrial Development Vision

In view of its growing contribution to the national economy, the industry Sector development Plan contains an overall vision which is based on national vision 2025 and reflects the contributions of the stakeholders represented in the Manufacturing industry sector. The vision of the manufacturing sector is;

> *…"building an industrial sector with***the highest manufacturing capability in Africa***which is diversified, globally competitive, environmentally-friendly, and capable of significantly contributing to the improvement of the living standards of the Ethiopian people by the year 2025"*

Thus, this vision requires a manufacturing sector that is dynamic and market –led producing high value added competitive products. The sector needs to be highly integrated with other sectors of the economy and continually diversifying into environmentally friendly new and emerging manufacturing sectors.

4.2 Industrial Development Directions

To ensure faster and sustained development of the industrial sector, favorable conditions should be created for industry to play a key role in the economy.

As framed in the industrial policy and strategy the balanced growth of labor intensive industries, the industries with broad sectoral linkages, export oriented and import substitution sectors will be established and expanded; followed along with the introduction of high tech and heavy industries in the last planning period. To this end, particular emphasis will be given to main strategic directions focusing on expansion and development of micro and small enterprises; development of medium and large scale industries.To bring about manufacturing sector transformation the following five development directions are envisaged.

1) **Upgrading and capacity increment of existing industry sectors**

Capacity enhancement of the existing priority medium and large industries is one of the key industrial development directions in the planning period. The following medium and large scale sub industries will be selected as a priority sector for which all round support will be provided to achieve the targets in each planning phase.

- Textile and Garment Industries
- Leather and Leather Products Industries
- Agro-processing Industries,
- Chemical and Pharmaceutical Industries
- Metal and Engineering Industries

Currently, these industries are operating below their capacity. Most of them - if not all are operating below 40% of their full capacity. In this phase these selected industries will grow their productive capacity by diversifying their products and markets for which sustainable support will be provided.

2) **Diversification of manufacturing sector to new sectors**

New and diversified sector development will be another direction of industrial development achieving the vision of becoming a middle income country by 2025. Diversification is possible in the existing major priority sectors as well as in the new areas. For the purpose of selecting new industries and products the following criteria were use.

- Market potential
- Local and global value chain consideration
- Potential to value addition
- Resource potential (***For more detailed information refer annex 4***.)

Accordingly, the following industries will emergeduring this and the last phase of the planning period.

- **Agro processing**
  - Wood based products manufacturing industries
  - Sea food processing factories in potential dam areas
  - Spices extraction and processing factories
- **Textile and garment industries**
  - Man-made fibers manufacturing industries
  - Technical textiles manufacturing industries
  - Natural fibers (including wool, silk and sisal) manufacturing industries

- **Footwear,leather and leather products manufacturing industries**
    - Rubber, plastic and textile shoes fabrications
- **Metal and engineering industries**
    - Machinery, machine tools and equipment manufacturing industries
    - Iron and Steel Industry
    - Automotive industries
- **Chemical Industries**
    - Petro chemical /Bio-based/ industries
    - Special chemicals (Construction chemicals ,Dyes and dyestuffs)industries
    - Alcohol based chemical products (Acetic acid ,acetone etc) industries
- **Pharmaceutical Industries**
    - Specialty medicines and manufactured indigenous medicines
    - Food supplements
    - Pharmaceutical components and ingredients
    - Cosmetics
- **New industries**
    - Packaging industries
    - Bio-technology industries
    - Electrical and electronics industries
    - ICT,both hardware and software manufacturing

3) Enterprise cultivation

One of the industrial development directions up to year 2025 will be industrial enterprise cultivation. As the ribs of industrial growth of the country, due attention will be given to micro and small scale enterprises.

All rounded support will be provided across the country to establish SMEs and creating wide employment opportunity for youth and women and alleviating poverty. The linkage between SMEs and MLEs will be established and sustained in every aspect of industrial endeavor along the value chains of the priority industries. Continuous support will be provided to transform SMEs to MLEs. Enterprise cultivation and the creationof entrepreneurial attitude along the broad and critical mass will be effectively undertaken.

Moreover, there should be a strong focus to link local production systems into the global manufacturing value chain through strategic partnerships with multinational and global firms.

4) Private and public investment

The private sector is the main actor for industrial development of the country. However, the current status of the private sector is not adequately developed to take over the leading role in industrial development. The investments intervention of the government in capital intensive and strategically important industries will be continued. The management capacity of the public enterprises will be enhanced to keep the industries productive and competitive. In support of the private sector growth, an exit plan of the government from industry investment will be supported through privatization process which will be transparent.

5) Industrial zone development

The development of the industrial zones, ultimately into industrial city development, is a continuous process which requires a longtime and sustained commitment from the part of the government. It demands not only the preparation of industrial development plan but also a comprehensive plan to establish regional business centers, social services (schools, hospitals, residences…etc.), environmental standards and others dimensions which are crucial to develop industrial cities –commonly known as development zones. This entails the fact that the government in one way or another couldn't be out of the zone development issues rather it will chair governance of the industrial cities development program.

Therefore, the development of industrial cities across the country will be focused in the planning period. The medium and large scale industries which are integrated along the value chain will be located in the industrial cities. In the initial stage of development, the government shall put an effort and provide potential development actors with different types of incentives and facilitation works. Simultaneously development of the business center and further expansion construction would be planned and implemented gradually.In short, to attract more investments and investors, the industrial zones will be furnished with essential infrastructure and social services. This is a crucial step towards urbanization and industrial transformation that ensure structural change of the country's economy.

4.3 Strategic Goals, Objectives, Strategies, and programs

Overall Goal and strategic objectives

The overall goal of theroad map and the strategic plan document is to bring about structural change in the economy through industrial development by:

- Increasing the share of the industry sector as % of the GDP from the current 13% to 27% by 2025

- Increasing the share of the manufacturing sector as % of the GDP from the current 4% to 17% by 2025

The situational analysis of the current industrial sector was carried out by the involvement of all relevant stakeholders. It indicates that the types of strategic responses that the constraints and opportunities generally highlighted to fall into the eight distinct but interrelated key strategic issues (refer the Strategic Plan Document)). Based on the strategic issues identified during the study the following five strategic objectives are formulated.

Strategic Objective 1: ***To further expand and develop the existing manufacturing industry priority sectors***

Strategic Objective 2: ***To diversify the manufacturing sector to new sectors***

Strategic Objective 3: ***To enhance Enterprise Cultivation and Entrepreneurship***

Strategic Objective 4: ***To Increase public, local and foreign investment for the ID***

Strategic Objective 5: ***To develop and operationalize Industrial zones and cities***

Key Strategies and Programs

The achievement of the stated strategic objectives clearly calls for the choice of appropriate strategies that help to achieve the strategic objectives. Based on the overall strategic directions outlined in this study, the following six key strategies are developed (for details refer Industrial Development Strategic Plan Document (second deliverable)).

- ***ensuring conducive business environment for industrial development***
- ***availing competent human resource for Industrial Development***
- ***availing quality industrial inputs for value- addition***
- ***developing and diversifying markets for the manufacturing industry outputs (local, regional, global markets)***
- ***enhancing Technology Transfer for Industrial Development***
- ***developing and providing institutional support for Industrial Development***

Major programs of the industrial Development Plan

The implementation plan is based on selected programs which reflect the various activities and projects to be undertaken to achieve the strategic objectives set forth. Six major programs are designed to achieve the five strategic objectives of the industrial strategic plan. These programs are listed below and are described in the Ethiopian Industrial Development Strategic Plan Document, 2013.

- **Priority sectors Expansion Program**
- **New Manufacturing sectors development program**
- **Industrial Enterprise and Entrepreneurship Development Program**
- **Local and Foreign investment Promotion Program**
- **Government (Public) sector investment program**
- **Industrial city Development Program**

4.4. Industrial Development Phases

The five strategic objectives listedin the preceding section shall be attained through three developmental phasesto achieve the industry vision by 2025. The implementation of these phases will bring about the transformation and of economic and industrial structure changes.

Phase 1:Enhancing the productivity of major industries (2013-2015)

In this phase focus will be given for light industries which encompass a wide linkage with other sectors including agriculture sector. The highest priority will be given to the development of SME and Productivity Enhancement of Major Industries which are identified as priority industry sectors. The industrial targets set by GTP are the key targets to be achieved in this planning phase. The significant percent of the manufacturing sector will remain the light industries; however,% share will gradually reduce up to the vision period 2025.

Table 11: Manufacturing sector growth target in phase one

Sector	**2013**	**2014**	**2015**
Industry Sector in % GDP	15.25	16.99	18.73
Manufacturing industries in % GDP	5	6	7
• Agro-Processing industry (%)	2.8	3.1	3.8
• Chemical and Pharmaceutical industry (%)	1.3	1.5	1.6
• Textile and Apparel industry (%)	0.2	0.4	0.45
• Leather and Leather products industry (%)	0.3	0.4	0.45
• Metal and Engineering industry (%)	0.4	0.6	0.7

Source: Estimated targets by the study

The trend that shows how the major priority industries will grow in the remaining GTP period is depicted in the figure below (Figure 7).

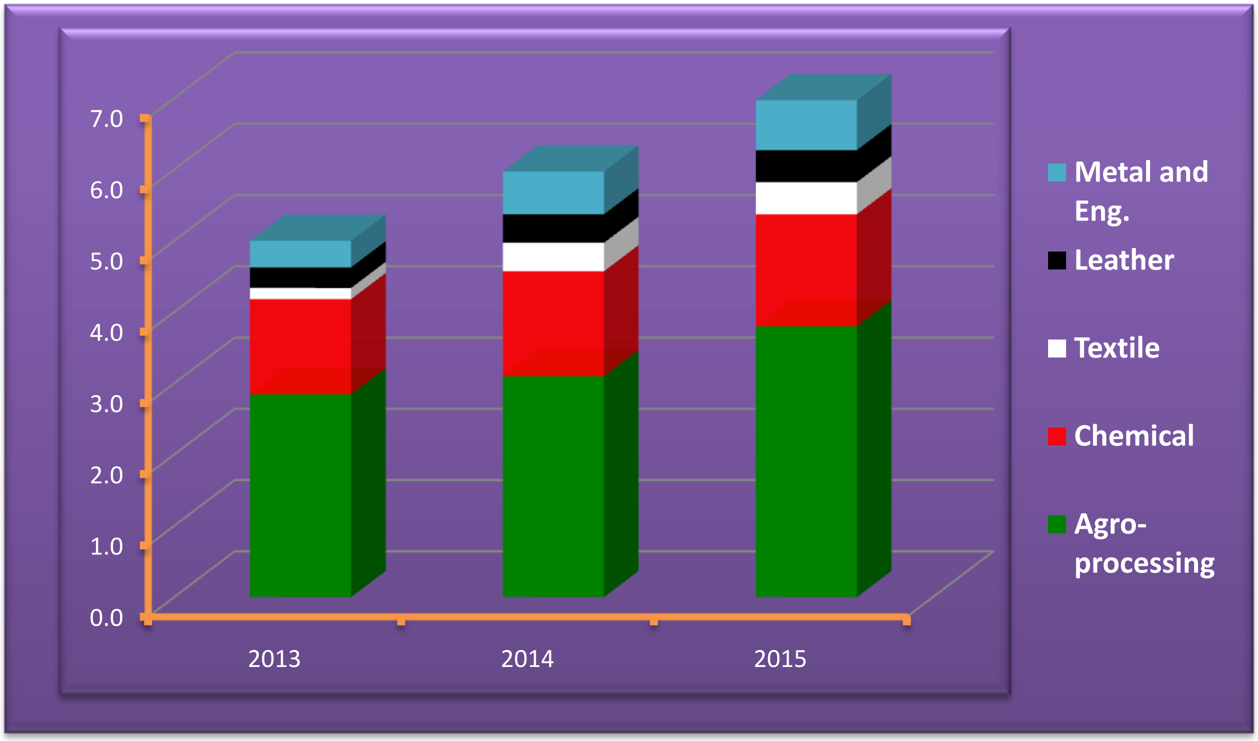

Figure 6: The growth of the major priority industries during the remaining GTP period as percentage of GDP

Phase 2: Diversifying and emerging new key industries (2016-2020)

In this planning phase distortion will be introduced to achieve rapid growth of the manufacturing sector and to become a middle income country by the year 2025. In this phase focus will be given to build up new keyindustries the manifestation of which is the rising of heavy metal and chemical industries, which involves a wide linkage with other sectors including light industries. Along the building of heavy metal, Chemical and Pharmaceutical industries,due attentionwill be given to major Industries which are identified as priority sectors in GTP. Increased industrial key targets are set to be achieved in this planning phase. In this phase capacity to develop new more industries like Knowledge-based industries and Nano-Technology will be built in effort to lay foundation for the future industrial transformation beyond 2025.Like in the first phase here also the significant percent of the manufacturing sector will remain the light industries; however, % share of heavy metal andchemical industries will gradually increase up to the vision period 2025 and a new sectors will eventually emerge in this second phase of industrial development.

Table 12: Share of existing sector to the manufacturing sector(in %).

	2016	**2017**	**2018**	**2019**	**2020**
Manufacturing	8%	9 %	10%	11 %	12%
Agro-Processing Industry	4	4.5	4.8	5	5.5
Chemical and Pharmaceutical industry (Total)	1.3	1.45	1.6	1.65	1.8
• Chemical and allied industry	1.03	1.16	1.28	1.32	1.44
• Pharmaceutical Industry	0.27	0.29	0.32	0.33	0.36
Textile and apparel industry	0.55	0.65	0.76	0.8	0.9
Leather and leather products industry	0.55	0.65	0.75	0.8	0.9
Metal and engineering industry	1.2	1.3	1.4	1.63	1.75
ICT and Electronics Industry	0.16	0.18	0.3	0.4	0.43
Petrochemical Industry	0.16	0.18	0.29	0.36	0.36
Biotechnology Industry	0.08	0.09	0.1	0.36	0.36

Source: Estimated target by the study

The figure below (Figure 8) shows how the existing priority industries are still important and their growth is further ensured even in the second phase of the industrial development.

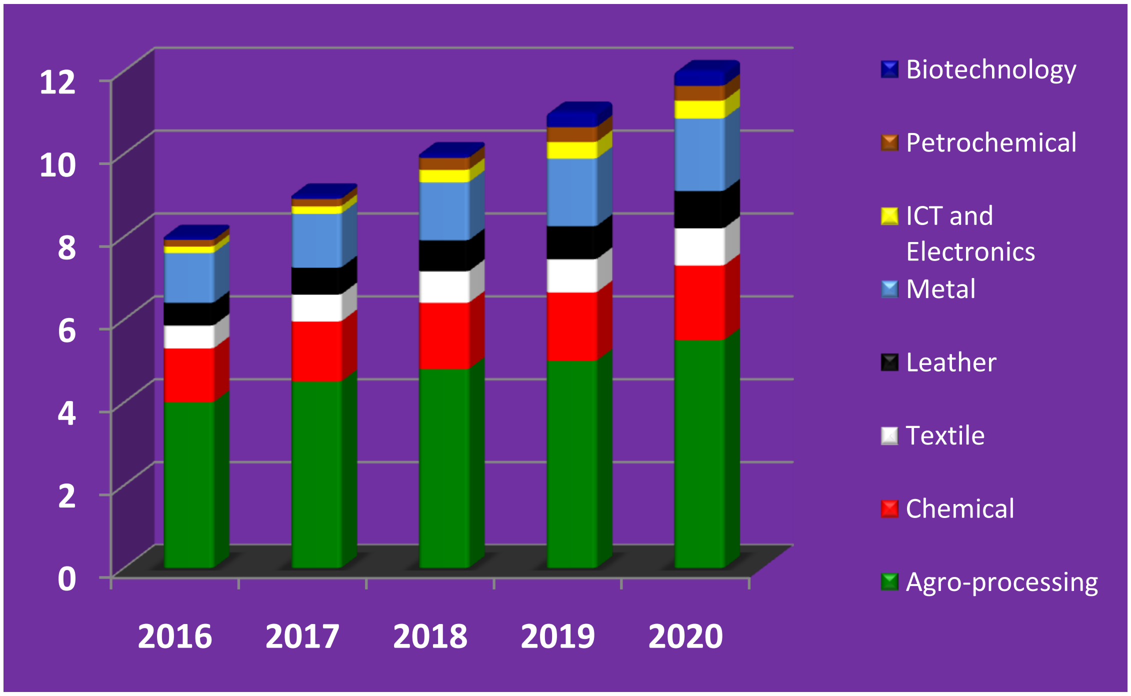

Figure 7: Growth of the existing and emerging new industriesin phase two

In this phase,new and upcoming industries as a part of diversification in the existing priority sectors are planned to emerge.Figure 8 and the estimated shares of each sector (table 12) include both the existing and new and upcoming industries in the existing as well as in the new areas.

Phase 3: Building up High-tech Industries (2021 -2025)

The last planning phase extends from year 2021 to 2025 which focus on building up and further enhancing the capacity of high tech industries and the deepening and expansion of heavy metal and chemical industries with stronglinkageswith other sectors including the existing light industries. Industrial key targets are set to be achieved in this planning phase for all three groups of industries. The % share of heavy metal and chemical industries and high tech industries will gradually increase up to the vision period 2025. By the end of 2025, the industry shows significant structural change and the structure of the sector will consist of more than 50% of Medium & High-tech Industry. In addition tapping potential to develop Knowledge-based industries and Nano-Technology will take place so that such industries will come up in the next stage of industrial development after 2025.

Table 13: Share existing priority sector in phase three

Sector	2021	2022	2023	2024	2025
Manufacturing	13 %	14%	15%	16%	17%
Agro-Processing industry	5.8	6	6.1	6.2	6.3
Chemical and Pharmaceutical Industry (Total)	2	2.1	2.25	2.4	2.55
• Chemical and allied industries	1.8	1.89	2.025	2.16	2.295
• Pharmaceutical Industries	0.2	0.21	0.225	0.24	0.255
Textile and apparel industry	1	1.1	1.2	1.3	1.4
Leather and leather products industry	1	1.1	1.2	1.3	1.4
Metal and Engineering industries	1.9	2.1	2.2	2.4	2.55
ICT and Electronics Industry	0.52	0.55	0.7	0.9	1.05
Petrochemical Industry	0.39	0.5	0.65	0.75	0.9
Biotechnology Industry	0.39	0.55	0.7	0.75	0.85

Source: Estimated target by the study

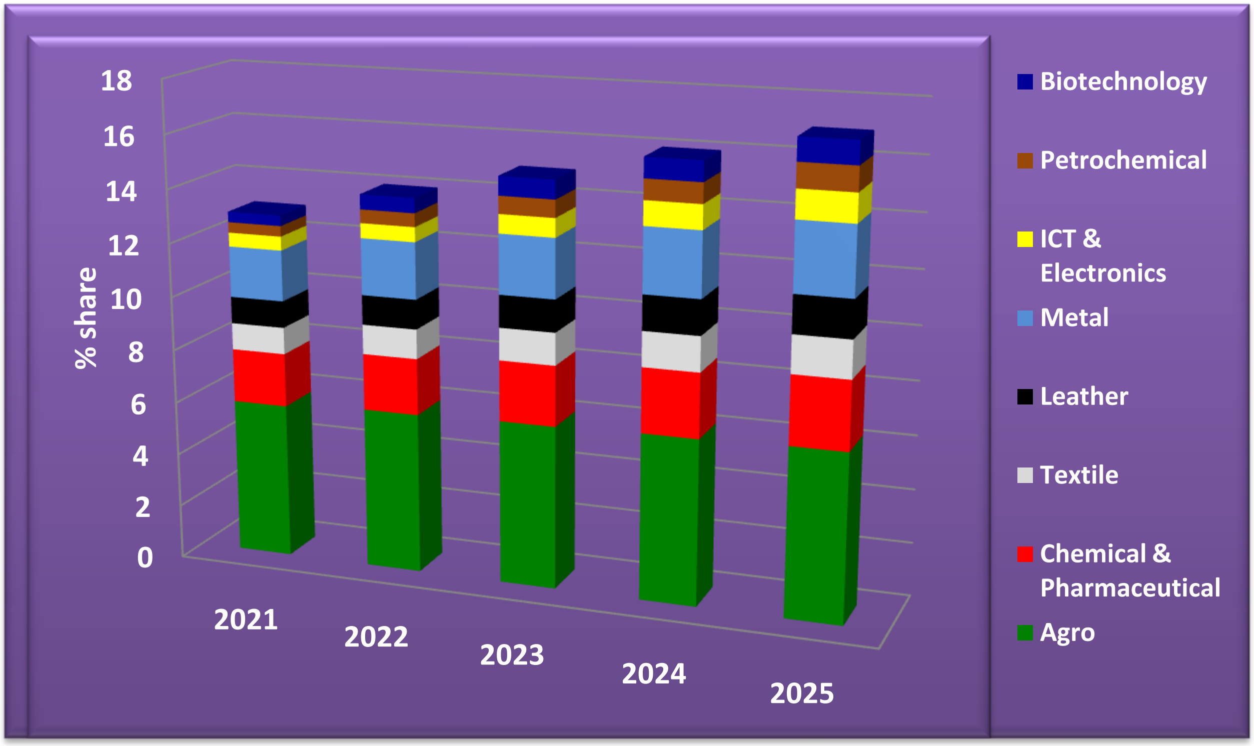

Figure 8: Growth of the existing sector in the third phase of industrial development

Transformation of the manufacturing sector

The transformation processis expected to be implemented insuch a way that in each phase there are industries for which top priority will be given. For some industries that will come in the next phase and infrastructure and social overhead capital needed for the new coming industries, necessary potential will be tapped. The industries after tapping their potential will become top priority in the next phase of industrial development. Finally, capacitybuilding activities will also be started which will lead to tapping potential activities in the proceeding phase. The following figure depicts the summery of the industry transformation process;

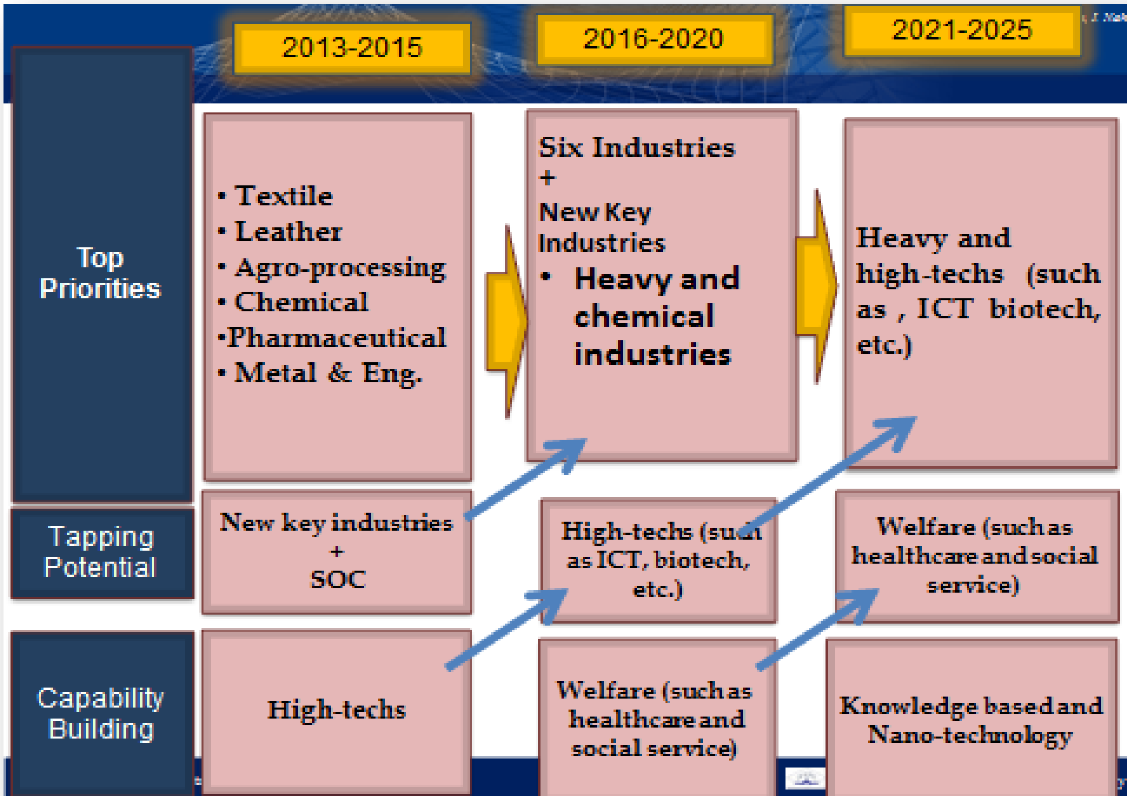

Figure 9: Industrial Transformation Process

4.5. Major targets by end of phases

The following table summarizes the major targets to be achieved by the end of each phase as measured by key growth indicators.The manufacturing sector as a whole is targeted to create gross value of product worthof 4.2., 13.3, and 35.2billion USD in the year 2015, 2020, and 2025.

The sector's contribution to the economy in terms of foreign currency earning will also improve from time to time. Accordingly, the foreign currency earning is targeted to be 2618 mil. USD by the end of year 2015.But it is expected to grow nearly by three folds(7264.2 mil. USD)in second phase and finally by eight folds (16228.6 mil USD) by the end of the third planning phase, that is, by the end of 2025.

The sector is also expected to significantly contribute to the new job creation effort of the country. During the year 2012 it has created 204 thousands new job. From thislevel, the new job that will be created by the end of 2015 will be increased to 236 thousands, and to 377 thousands by the year 2020, and finally by the end of 2025 to reach the level of 780 thousands.

This is an increase nearly by 330% as compared to year 2015. During the planning period the enterprise particularly SMEs shall be cultivated and gradually promoted to SME's. The targeted number of SMEs cultivated is 25, 40, and 65 thousands by the year 2015, 2020, and 2025 respectively.

The summary of major targets is presented in table 14 while detailed plan to achieve these targets by each subsector is outlined in the Ethiopian Industry Development Strategy (2013-2025) document.

Table 14: ***Major targets to be achieved by the end of each Phase period***

S.N	Growth indicators	Base year	Targets (end of phase)		
		2012	2015	2020	**2025**
1	Gross value of Product of manufacturing sector (Million USD)		4190	132816	**351376**
1.1.	Metal value addition in billion Birr	26	101.4	376.4911	1397.885
1.2	Growth rate in value addition assuming the minimum growth rate of 30% sustained (estimated using historical data)	0.3	1	0.3	0.3
1.3.	Per capita steel consumption in kg	17.78	34.72	81.41	190.91
2	Gross value of product of the textile sector (Million USD)	1074	2545	3043	3853.5
3	Foreign currency earning in million USD	255.4	2618	7264.161	**16228.6**
3.1.	Agro-processing industries	51.75	300	832	**1859.7**
3.2.	Chemical industries	7.01	20	55.5	**123.9**
3.3.	Leather Industries	112.06	496.9	1378.7	**3080.2**
3.4.	Textile industries	84.63	1000	2773.63	**6196.5**
3.5	Other new coming industries including metal		802	2225.5	**4971.8**
4	Growth rate of manufacturing sector (%)	4.5	30	20	**15.7**
5	Employment growth rate (%)		5.36	12	18.29
5.1.	New jobs created by the manufacturing sector in each year in '000s	204	236	377	780
6	Capacity utilization of manufacturing industry (%)	61.2	78	82	87
7	Manufacturing Investment in BillionBirr	32	97	587.322	3556.156
8	Number of industrial zones developed	5	5	5	5
9	Enterprise Cultivation				
9.1	New job opportunityby SMEs in '000s	554	740	1199	1943
9.2	Rate of growth of SMEs (based on the average of 2013-2015)(%)		10.13	10.13	10.13
9.3	No MSEs (assuming an average 30 employees in each small enterprise) in '000	18	25	40	65

Source: Estimated using historical date

The table below summarizes the roadmap for the eventual development and transformation of the current and emerging manufacturing sector industries.

Table 15. Summary of eventual development and transformation of the current and emerging manufacturing sector industries

Sector	Industrial development Period (2013-2025)			Key Driving Forces
	Phase I 2013 – 2015[1]	Phase II 2016 – 2020[2]	Phase III 2021 – 2025	
Agro processing	• Increasing productivity of agro processing industries, • Intensified Food processing , • Establishing crude edible oil refinery for import substitution	• Spices extraction, • Packed and canned foods, Animal feed processing • Wood based manufacturing, • Cattle and goats meatDeboning, special cut meat	• knowledge and capital intensive Agro-processing industries • Bio and organic food and beverage export , • Fish sector development, and • Deepening the agro industries in Phase II	• **Social infrastructure** • **Favorable business environment and incentive for enterprises** • **Human resource development** • **Technological capability building** • **Resource mobilization**
Chemical and Pharmaceutical	• Inorganic base chemicals (Fertilizer, caustic soda, soda ash) • Pharmaceutical • PVC and polyethylene	• Base chemicals (fertilizer, inorganic and organic chemicals), • Pharmaceutical • Agro chemicals, • Bio-based chemicals, • plastic and rubber products	• Deepening Bio based Chemicals, • Specialty chemicals, and • Pharmaceutical	
Footwear , Leather and Leather products	• Leather Product diversification ; • Development of shoe city ; • Technology improvement of finishing leather ; • diversifying the raw hides and skins base such as camel, ostrich, crocodile, and pig etc	• Upgrade R&D capabilities; • Focus on champion product ; • Establish special studios of designing and product development centers : • Diversifying to Rubber , plastic and textile shoes	• Deepening and exporting Sport and causal shoes made of Rubber , • Plastic and textile shoes; • Deepeningchampion products	
Metal sector-Iron and Steel Industry	• Improving the product mix of iron and steel industry	• Establishment of iron ore extraction and other industries ;	• The growth of making coal-based iron industry ; • Deepening the	

Sector	Industrial development Period (2013-2025)			Key Driving Forces
	Phase I 2013 – 2015[1]	**Phase II 2016 – 2020**[2]	**Phase III 2021 – 2025**	
		• Further expansion of industries in Iron making, steel making , rolling mills,	development of iron making industry; • Development of crude steel industries and • Later finished steel Industries	
Metal sector-Non-ferrous base metal	• Establishment of new industry for manufacturing of primary product in the resource potential area (Copper, Nickel)	• Upgrading the product mix and value addition in the chain of non-ferrous base metals	• Deepening and development of the value chain of non-ferrous base metal	• **Social infrastructure** • **Favorable business environment and incentive for enterprises** • **Human resource development** • **Technological capability building** • **Resource mobilization**
Metal Engineering sector-Transport equipment industry	• Establishment of New Motor Vehicle Parts, body and trailer Manufacturing Industry	• Improving capability and widening the depth of product mix in parts, trailer, body and overall automotive manufacturing industry	• Specialization towards specific automotive industry and market segment	
Metal Engineering sector-Machinery and Equipment development	• Expansion of agricultural machinery industries; • Establishment of tooling/spare part/component manufacturing industry.	• Expansion of agricultural machinery industries ; • Tools, parts and components of manufacturing industry; • Establishment of machinery and equipment industry for common equipment and machinery , and • Construction machineries	• Establishment of machinery and equipment for Textile, Agro-processing, Leather and chemical industries; • Increasing the capability of industrial machinery for capital goods equipment.	
Textile and Garment	• Improve the cotton supply chain; • Further expand and increase productivity to achieve export	• Produce synthetic fiber (polyester); • Produce man-made fabric &	• Export man-made fabric & garments ; • Manufacturing of	

Sector	Industrial development Period (2013-2025)			Key Driving Forces
	Phase I 2013 – 2015[1]	Phase II 2016 – 2020[2]	Phase III 2021 – 2025	
	targets in textile and garment: • Build capacity for new technology in textile and garment	garments; • Build capacity for manufacturing of technical fabrics	technical fabrics; • Expand the variety of man-made fibers	
ICT and electronics Industry	• Human resource development in software and hardware manufacturing; • Establish links to global production	• HRD development; • Building strong R&D facilities; • Establishment of machinery and equipment industry for household electronic equipments and machines	• Increasing the capacity to produce advanced electronic equipments and machineries	**• Social infrastructure** **• Favorable business environment and incentive for enterprises** **• Human resource development** **• Technological capability building** **• Resource mobilization**
Petrochemical Industry	• Expanding mineral, agricultural and fossil fuel resource bases	• HRD development • Building strong R&D facilities • High skill development • Expansion of resources base	• Petro chemicals industries and products	
Biotechnology Industry	• Building R&D capabilities	• Building R&D capabilities and expertise in selected competitive areas	• Bio technology based products including bio agro, bio Pharms and bio industry	

[1]End of 2015 will be the era for the first big jump through the achievement of higher productivity through reformation.

[2]End of 2020 will be an era for Second big jump in growth rate due to completion of sound social infrastructure (transport,power,water, etc...)

5. Linkage between the Roadmap and Strategic Plan

In accordance with this Industrial development Roadmap document a 13 years Strategic Plan Document is developed. The Strategic Plan Document (SPD) will detail out necessary strategies, program and major activities to be accomplished to realize the vision of becoming a middle income country by the year 2025. The necessary institutional set up needed to support the industrial transformation process as per this Roadmap is provided in a separate document called Instructional Setup and Governance Framework.

The full picture of theIndustrial Development Roadmap is visualized in conjunction with these two documents - Strategic Plan and Institutional Set up document

Appendix

Annex 1: HISTORICAL ACCOUNT OF THE INDUSTRY SECTOR

The manufacturing industry in Ethiopia began to appear in the 1950's much earlier than in much of Sub-Saharan African countries. Modern industry commenced to emerge mainly in the second half of the 1950's and 1960's with import substitution as the main goal. The early 1970s ushered in a central planning system of economic management. This development, however, frustrated whatever little there was in private initiative that had appeared in the earlier period. This period witnessed a wholesale nationalization of major industrial establishments. The state became by far the most dominant economic actor and the government followed a policy of deliberate discouragement of the private sector development.

Prior to 1957, when Ethiopia initiated a series of five year development plans, cottage and handicraft industries met most of the population's needs for manufactured goods such as clothes, ceramics, machine tools and leather goods. The First Five-Year Plan (1957-61) sought to develop a strong infrastructure, particularly in transportation, construction and communications and link isolated regions. Another goal was the establishment of an indigenous cadre of skilled and semiskilled personnel to work in processing industries to help reduce Ethiopia's dependence on imports. Lastly, the plan aimed to accelerate agricultural development by promoting commercial agricultural ventures. The Second Five-Year Plan (1962-67) signaled the start of a twenty-year program to change Ethiopia's predominantly agricultural economy to an agro-industrial one. The plan's objectives included diversification of production, introduction of modern processing methods and expansion of the economy's productive capacity to increase the country's growth rate. The Third Five-Year Plan (1968-73) also sought to facilitate Ethiopia's economic well-being by raising manufacturing and agro-industrial performance. However, unlike its predecessors, the third plan expressed the government's willingness to expand educational opportunities and improve peasant agriculture. The total investment for the First Five-Year Plan reached 839.6 million birr, about 25 percent above the planned 674 million birr figure; total expenditure for the Second Five-Year Plan was 13 percent higher than the planned 1,694 million birr figure. The allocation for the Third Five-Year Plan was 3,115 million birr.

Between l950 and l960, the imperial government enacted legislation and implemented a new policy to encourage foreign investment. This new policy provided investor benefits in the form of tax exemptions, remittances of foreign exchange, import and export duty relief, tax exemptions on dividends, and the provision of financing through the Ethiopian Investment Corporation and the Development Bank of Ethiopia. In addition, the government guaranteed protection to industrial enterprises by instituting high tariffs and by banning the importation of commodities that might adversely affect production of domestic goods. Protected items included sugar, textiles, furniture and metal. The government also participated through direct investment in enterprises that had high capital costs, such as oil refineries and the paper and pulp, glass and bottle, tire, and cement industries. In l963, with the Second Five-Year Plan under way, the government enacted Proclamation No. 5l. The proclamation's objective was to consolidate other investment policies enacted up to that period, to extend benefits to Ethiopian investors (previous legislation had limited the benefits to foreigners only) and to create an Investment Committee that would oversee investment programs. In l966, Addis Ababa enacted Proclamation No. 242, which elevated the Investment Committee's status as an advisory council to that of an authorized body empowered to make independent investment decisions. Thus, by the early l970s, Ethiopia's industrialization policy included a range of fiscal incentives, direct government investment and equity participation in private enterprises.

The government's policy attracted considerable foreign investment to the industrial sector. For instance, in 1971/72 the share of foreign capital in manufacturing industries amounted to 4l percent of the total paid-up capital. Many foreign enterprises operated as private limited companies, usually as a branch or subsidiary of multinational corporations. The Dutch had a major investment (close to 80 percent) in the sugar industry. Italian and Japanese investors participated in textiles; and Greeks maintained an interest in shoes and beverages. Italian investors also worked in building, construction and agricultural industries.

In l975, the main characteristics of the manufacturing sector inherited by the revolution included a predominance of foreign ownership and foreign managerial, professional, and technical staffing; heavy emphasis on light industries; inward orientation and relatively high tariffs; capital-intensiveness; underutilized capacity; minimal linkage among the different sectors; and excessive geographical concentration of industries in Addis Ababa. The war in Eritrea and labor strikes and demonstrations also closed approximately 30 percent of the country's plants that had been located in that region.

The economic dislocation that followed the 1974 revolution had a significant impact on the manufacturing sector. Private sector capital investment ceased and labor's marginal productivity began to decline. In performance terms, the manufacturing sector's output after l975 grew haltingly. Manufacturing had grown at an average annual rate of 6.l percent between l965 and 1973. A period of decline from l974/75 to l977/78 and an average annual growth rate of l8.9 percent for l978/79 and l979/80 were followed by a reduction of the growth rate to about 3.1 percent per annum between l980/81 and l984/85 and 3.8 percent per annum from 1985/86 to 1988/89.

The manufacturing sector's performance paralleled developments in other parts of the country. In the revolution's early days, the dislocation caused by nationalization, the flight of managers, the wars in Eritrea and the Ogaden, and local strife in many areas disrupted production and hurt productivity. Zemecha production campaigns, which focused on increasing capacity utilization, characterized the late 1970s. As a result of these campaigns, Ethiopia achieved growth rates of 27.3 percent in 1978/79. By l985 capacity utilization estimates of many industries ranged between 70 and l00 percent, and many plants operated in three shifts. These figures were high by African standards.

On February 7, l975, the government released a document outlining socialist Ethiopia's economic policy. The policy identified three manufacturing areas slated for state involvement: basic industries that produced goods serving other industries and that had the capacity to create linkages in the economy; industries that produced essential goods for the general population; and industries that made drugs, medicine, tobacco, and beverages. The policy also grouped areas of the public and private sectors into activities reserved for the state, activities where state and private capital could operate jointly, and activities left to the private sector.

Manufacturing productivity began to decline by l980 because of a downturn in agricultural production and a shortage of foreign exchange to import raw materials. Analysts expected the manufacturing sector's productivity to decline further in the 1990s as equipment aged and spare-parts shortages grew. In response to the downward trend, in l987/88 the government planned to invest 342 million birr in industrial enterprises to increase production capacity. In l989 the government issued Proclamation No. ll, which enunciated policies intended to attract foreign investment. Finally, in March l990 Dergue announced the replacement of Ethiopia's socialist economic system with a mixed economy. Among the proposed changes were that private investors would be permitted to participate in all parts of the economy with no limit on the amount of capital invested.

Issued in l983, the PMAC's Proclamation No. 235 (the Joint Venture Proclamation) signaled Ethiopia's renewed interest in attracting foreign capital. The proclamation offered incentives such as a five-year period of income tax relief for new projects, import and export duty relief, tariff protection, and repatriation of profits and capital. It limited foreign holdings to a maximum of 49 percent and the duration of any joint venture to twenty-five years. Although the proclamation protected investors' interests from expropriation, the government reserved the right to purchase all shares in a joint venture "for reasons of national interest." The proclamation failed to attract foreign investment largely because foreign businesses were hesitant to invest.

In l989, the government issued Special Decree No. ll, a revision of the l983 proclamation. The decree allowed majority foreign ownership in many sectors, except in those related to public utilities, banking and finance, trade, transportation and communications, where joint ventures were not allowed. The decree also removed all restrictions on profit repatriation and attempted to provide more extensive legal protection of investors than had the l983 proclamation.

In 1990, acknowledging that socialism had failed; Dergue proposed implementing a mixed economy. Under the new system, the private sector would be able to participate in all parts of the economy with no limit on capital investment (Ethiopia had a US $ 250,000 ceiling on private investment); developers would be allowed to build houses, apartments, and office buildings for rent or sale; and commercial enterprises would be permitted to develop industries, hotels, and a range of other enterprises on government-owned land to be leased on a concessionary basis. Additionally, state-owned industries and businesses would be required to operate on a profit basis, with those continuing to lose money to be sold or closed. Farmers would receive legal ownership of land they tilled and the right to sell their produce in a free market. Whereas there were many areas yet to be addressed, such as privatization of state enterprises and compensation for citizens whose land and property had been confiscated, these proposals generated optimism among some economists about Ethiopia's economic future. However, some observers pointed out that Dergue's proposals only amounted to recognition of existing practices in the underground economy.

The industry sector in general and the manufacturing sector in particular were given duenational importance following the formulation of the national industry policy in 2003 by the FDRE .

The strategy is designed within the framework of the world environment and the free market economy philosophy with the following underlying principles:

- Accept that the private capitalist is the engine of the industrial development strategy.
- Following the direction of Agriculture- led Industrialization
- Following Export-led Industrialization
- Focus on Labour Intensive Industries
- Using Coordinated Foreign and Domestic Investment
- Strong State Control
- Mobilizing the whole society for industrial development.

The industry policy has identified priority sectors that deserve attention to build the platform for the industry to take its key leading role in the economy. These sectors include Textile and garment, Leather and Leather Products Industry, chemical, metal, Agro-processing Industry and the Construction Industry. The industry policy has continued to be the corner stone for future industrial development in Ethiopia.

Annex 2 Macroeconomic , Human , and social devlopment Indicators of a Model Middle Income Country

Table 5.1 Key Macroeconmic Indicators (Source: *International Growth Centre (IGC , 2012)*

TABLE 1 : KEY MACROECONOMIC INDICATORS COMPARISON												
Country Name	Year	Agriculture (% of GDP)	Industry (% of GDP)	Manufact. (% of GDP)	Services (% of GDP)	Exports (% of GDP)	Imports (% of GDP)	Gross fixed capital formation (% of GDP)	FDI, net inflows (% of GDP)*	Gross domestic savings (% of GDP)	Net ODA (% of GNI)	Revenue, excl. grants (% of GDP)
Brazil	1969	13.22	37.36	28.85	49.42	6.62	6.55		2.53	22.42	0.52	
China	2004	13.39	46.23	32.37	40.38	33.95	31.40	40.73	3.96	45.81	0.09	
Colombia	1970	25.69	28.30	21.15	46.02	14.31	15.82	18.08	4.36	18.66	2.29	
Costa Rica	1965	24.57	21.72		53.71	25.26	28.75	16.38	7.22	12.50	2.63	
Egypt	1998	17.11	30.86	18.29	52.02	16.21	25.71	21.33	8.87	12.00	2.28	
El Salvador	1992	14.56	30.28	24.40	55.16	16.09	32.43	17.18	7.40	2.18	6.78	
Guatemala	1998	23.44	19.99	13.57	56.57	18.17	26.25	16.65	2.18	9.31	1.21	9.53
Korea, Rep.	1973	26.74	29.21	22.23	44.04	28.68	31.85	24.18		22.44	2.06	
Malaysia	1976	27.64	35.05	18.52	37.31	48.95	39.03	22.52	4.53	31.18	0.56	
Morocco	2007	13.73	27.31	15.04	58.95	35.75	44.86	31.25	3.73	23.37	1.44	34.75
Paraguay	1980	28.62	27.44	16.01	43.93	15.31	28.70	30.17	1.69	18.26	0.66	
Sri Lanka	2006	11.34	30.64	19.23	58.02	30.13	41.13	24.87	1.86	16.98	2.82	16.23
Syria	2004	21.86	34.64	9.75	43.50	40.57	37.78	23.83	3.06	20.20	0.43	
Thailand	1990	12.50	37.22	27.20	50.28	34.13	41.65	40.38	4.58	33.84	0.94	
Tunisia	1990	15.72	29.79	16.89	54.49	43.56	50.60	24.36	4.30	20.02	3.29	30.71
Mean	**MMIC-O**	**19.34**	**31.07**	**20.25**	**49.59**	**27.18**	**32.17**	**25.14**	**4.31**	**20.61**	**1.87**	**22.80**
Median	**MMIC-O**	**17.11**	**30.28**	**18.87**	**50.28**	**28.68**	**31.85**	**24.00**	**4.13**	**20.02**	**1.44**	**23.47**
Mean	**MMIC**	**20.7**	**30.7**	**17.8**	**48.6**	**30.5**	**37.4**	**26.6**	**4.5**	**21.6**	**4.5**	**20.7**
Median	**MMIC**	**19.6**	**29.1**	**16.4**	**50.4**	**28.9**	**32.2**	**26.3**	**3.7**	**22.6**	**2.7**	**18.5**

Table 2 Key Human,and social development Indicators of a Model Middle Income Country (Source: ***International Growth Centre (IGC , 2012)***

TABLE 2 : KEY HUMAN AND SOCIAL DEVELOPMENT INDICATORS COMPARISON											
Country Name	Year	Employment in agriculture (% of total employment)	Employment in industry (% of total employment)	Rural population (% of total population)	School enrollment, secondary (% gross)	Money and quasi money (M2) as % of GDP	Electric power consumption (kWh per capita)	Poverty headcount ratio at $2 a day (PPP) (% of pop)	GINI index	Poverty gap at $1.25 a day (PPP) (%)	Population growth (annual %)
Brazil	1969			45.30		17.92					2.52
China	2004	44.10	17.70	60.52	66.97	141.81	1586.25				0.59
Colombia	1970			45.20	23.98	19.84					2.60
Costa Rica	1965			64.50		19.61					3.38
Egypt	1998	29.80	22.30	57.32	70.07	73.28	867.32				1.88
El Salvador	1992	35.80	22.70	48.88	40.85	30.10	385.01				1.55
Guatemala	1998	37.60	23.20	55.70	31.27	19.53	344.44	29.85	55.65	15.65	2.29
Korea, Rep.	1973			54.92		31.47	399.06				1.99
Malaysia	1976			61.44		60.15	463.90				2.30
Morocco	2007	43.30	20.30	44.32	55.85	97.40	707.05	13.97	40.88	2.50	1.20
Paraguay	1980			58.30	26.52	19.43	240.40				2.78
Sri Lanka	2006	32.20	26.60	84.90	87.00	37.93	399.23				1.10
Syria	2004	27.00	25.60	47.12	63.11	74.18	1322.46				3.07
Thailand	1990	63.30	13.60	70.60	29.06	68.42	708.13				1.36
Tunisia	1990	25.80	33.60	42.10	44.03	49.67	638.43	19.04	40.24	5.87	2.43
Mean	**MMIC-O**	**37.66**	**22.84**	**56.07**	**48.97**	**50.72**	**671.81**	**20.95**	**45.59**	**8.01**	**2.07**
Median	**MMIC-O**	**35.80**	**22.70**	**55.70**	**44.03**	**37.93**	**551.17**	**19.04**	**40.88**	**5.87**	**2.29**
Mean	**MMIC**	**41.2**	**20.5**	**62.3**	**46.5**	**51.5**	**403.7**	**48.4**	**38.9**	**5.3**	**2.2**
Median	**MMIC**	**43.3**	**18**	**64**	**47.6**	**43.1**	**323.6**	**48.4**	**38.5**	**4.6**	**1.9**

Annex 3

Key informant Interviews

and Focused Group Discussion conducted

at Macro and sectoral levels

on

Ethiopian's Industrial Development Road Map,

Strategic plan (2013- 2025),

and

Institutional Set-up

(October 2013- January 2014)

1. Macro Level Data collection

1.1 Macro Level In-depth Interviews conducted

No.	Name	Organization	Position
1	**HE**AtoMekonnenManyazewal	Ministry of Industry	Minister
2	**HE**AtoTadesse Haile	Ministry of Industry	State minister
3	**HE**AtoAlemayehuTegenu	Ministry of water and Energy	Minister
4	**HE** w/o SinkneshEjigu	Ministry of Mines	Minister
5	**HE** AtowondiradMandefro	Ministry of Agriculture	State minister
6	**HE** Dr Abraham Tekeste	Ministry of Finance and Economic Development	State minister
7	**HE**AtoWondwossenKiflu	Ministry of eduction	State Minister , TVET
8	**HE**DrKabaUrgessa	Ministry of Education	State Minister, HE
9	**HE**YohannesAyalewBirru	National Bank of Ethiopia	Vice Governor
10	AtoFikruGezahegn	National Bank of Ethiopia	A/Director
11	AtoTesfayeGezahegn	National Bank of Ethiopia	A/Director
12	Ato Elias Loha	National Bank of Ethiopia	Director
13	AtoGebreMeskeleChalla	Federal Small and Micro enterprises Development Agency	Director
14	AtoMekuria	Eth Electric Power corporation	Planning Head
15	**HE** Mohammed Seid	Eth Investment Agency	A/ Director General
16	**HE**AtoEsayasBahre	Development bank of Ethiopia	President
17	AtoyohannesMelese	Customs and Revenue Auth.	Director, Investment Promotion directorate

2. Sectoral level data collection

2.1 Agro processing Sector

2.1.1 In –Depth Interview

No.	Key Informant	Organization	Position
1	DrSeife	Agricultural Transformation Agency	Director
2	AtoWondimuBelete	Ethiopian investment Agency	Agro sector team leader
3	AtoAmanuel	Ethiopian investment Agency	Expert
4	w/o RahelFitsum	Ethiopian investment Agency	Expert
5	AtoDendana Chemeda	MoI Agro processing	Director
6	Ato Fekade Wondmagegn	Extension Division Ministry of Agriculture	Director

7	W/o Keno Abate	Extension Division Ministry of Agriculture	Expert
8	AtoSeyoum Abate	Extension Division Ministry of Agriculture	Expert
9	Ato Mohammed	Extension Division Ministry of Agriculture	Expert
10	GidayGebremedhin	Ministry of Agriculture	Milk and meat development Director
11	AtoEssayas	Ministry of Agriculture	Agro processing Director
12	Mr. Asefa	Ministry of Trade	Advisor to MoT

2.1.2 Focused Group Discussion (1)

No.	Name of Participant	Organization	Position
1	MogesAzmtie	Health Care food Manufacturing	Project manager
2	Aster Mengesha	Aster BUNNA	General Manager
3	KalayouTessema	Ethiopian Shipping and logistics Enterprise	Shipping Director
4	Elias Geneti	Dipasa Agroindustry	Managing Director
5	Ben Van Ampting	Selet Hilling Plc	General Manager
6	Tesfaye T/Haimanot	KalebPlc	General Manager
7	TewodrosAssefa	Elliana Coffee	General Manager
8	Solomon Abate	Ethiopian Institute of Agricultural Research	Rp Director General
9	DawitAlem	EIAF	Coordinator
10	Amareseifu	Ministry of Industry	Team leader
11	ZergawFeleke	Ministry of Industry	Team leader
12	MenegshaTadesse	AGP AMDE/USAID	Team leader
13	Yibel H/Sillasie	Africa Juice T SC	Finance manager
14	BeleteBeyene	Hilina Foods	General Manager
15	Haile W/ Giorgis	Fafa Food Plc	D/Director general
16	Mesfin Abate	National Alchohol and Liquir Factory	Deputy CEO

2.1.3 Focused Group Discussion (2)

No.	Name of Participant	Organization	Position
1	YohannesBeshah	Honey & Wax Association	General Manager
2	Abu Negesso	EHBPEA	President
3	TamratEjigu	Ethiopian meat Exporters Association	A/ Sec. General
4	BedluAsfaw	Ministry of Industry	Team coordinator
5	Solomon Abate	EIAR	Rp Director general
6	TedelaZegeye	EHPEA	Admin & Finance
7	AsegidAdane	UNIDO	Program officer
8	MulugetaTegegn	Edible Oil producers Association	Sec. General
9	DessieAbeje	Ministry of Industry	Team Coordinator

2.2 Leather and Footwear

2.2.1 In –Depth Interview (1)

No.	Key Informant	Organization	Position
1	WonduLegesseGizaw	LIDI	Director General
2	BerhanuSerjabo	LIDI	Director, Communications Directorate
3	Mr Mario	ARA shoe Factory	General manager
4	MrsRaluca	ARA shoe Factory	Deputy GM

2.2.2 Focused Group Discussionat LIDI (1)

No.	**Name of particicpants**	**Organization**	**Position**
1	XuJian Liang	Ethio-Africa Tannery	General Manager
2	TsegayeTefera	LIDI	Registrar
3	RedimanBedada	Modjo Tannery	Manager
4	MishamoWakaso	LIDI	Technologist
5	YalewAlemayehu	Wallia Leather	Deputy Manager
6	AndigegnKebede	LIDI	Economist
7	BethelhemTilahun	BoStex PLC	General Manager
8	WondimuKumera	LIDI	HR Director
9	TesfayeBeyene	Jamaica Shoes	Deputy Manager
10	BinyamBedada	Dire	General Manager
11	WonduLegesse	LIDI	Director General
12	YakobTaddesse	Ethio-Africa Tannery	Administrative Manager

2.2.3 Focused Group Discussion at LIDI(2)

No.	Name of particicpants	Organization	Position
1	DagnachewDemelash	Ethiopian Tannery ,S.C.	Finance Director
2	Brook Debebe(AMBasador)	ELICO	General Manager
3	BerhanuSerjabo	LIDI	Director,Communications Directorate
4	EsmaelFeyissa	HAFADE PLC	Deputy General Manager
5	Solomon Getu	Crystal Tanneries	Managing Director
6	TesfayeBegna	COLBA Tannery	General Services Head
7	AbdissaAdugna	Ethiopian Leather Industries Association	General Secretary
8	Solomon Taddesse	LIDI	Director
9	KaluKebede	LIDI	E/director
10	Berhanu Negus	LIDI	Director, Testing and Laboratories

2.3 Chemical and Pharmaceutical

2.3.1 In –Depth Interview (1)

No.	Key Informant	Organization	Position
1	AtoShimelis	Adami Tulu Pesticide	General Manager
2	AtoTesfaye	Pharmacure (Ethiopia) GM	General Manager
3	W/t EteneshAbreha	Pharmaceutical Manufacturers Association	President and Production expert
4	AtoBekele	Chemical Manufacturers Association	President
5	AtoWoldeAregay	Caustic Soda S.co	General Manager
6	Eng. LelisaDaba	Cleaner production center	Director
7	Eng. AsratBulbula	Midroc Ethiopia	Senior Consultant
8	AtoAsmelashHailu	ASMI medical supplies and industry	Director and sec of Pharma Association
9	Ato Solomon Yohannes	Ministry of industry	Chemical directorate director
10	AtoTesfayeH/ Micheal	CADILAC Pharmaceutical Ethiopia Plc	President

2.3.2 Focused Group Discussion(Pharma sector) (1)

No.	Participant	Organization
1	YemanebirhanTaddese	PFSA
2	ShimelesAyele	EPHARM
3	Yasin Ahmed	FMHACA
4	MengesteabWoldearegay	FMHACA

2.3.3 Focused Group Discussion(Chemical sector) (2)

No.	Participant	Organization
1	AtoTsega K.	Afro German
2	Ato Daniel Tsegaye	Chemical society of Ethiopia
3	AtoGirmaNeway	Agica (Ethiopia) Company
4	AtoSeifuDerebe	Ethiopia Plastic Industry
5	Ato Daniel Tsehaye	Horizon Addis TyreS.Co
6	Eng. Seifedin Khalid	Kadisco Chemical Ind. Plc
7	AtoHabtamuKhasaye	Chora Gas & Chemical products
8	AtoBerhanuAssefa	AAIT/AAU

2.4. Basic Metal and Engineering Sector

2.4.1 Interviews

(Venue: Metal Industries Development Institute (MIDI) and other industries)

No	Name of Respondent	Organization
1	WondimuDeginetu	Toussa Steel Factory
2	Samuel Muluneh	Kasma Engineering PLC
3	Daniel Gebre	Mesfin Industrial Engineering PLC
4	YesufAdemnur	Mesfin Industrial Engineering PLC
5	AtoHabteWold	Steely Metal PLC
6	Mohammed Abdi	Hadid Trading PLC
7	AbdiSali	Hadid Trading PLC
8	DemirewMetaferia	Sintec Ethiopia PLC
9	AtoMelakuMesselu	walia steel plc
10	AtoSeyoumTeshome	FeSMEDA(Metal and Engineering Directorate)
11	MathewosAssele	Kality Metal Products Factory
12	AsegedMamo	Ethiopian Metal Products Manufacturing Association-G/Manager
13	WorknehDelelegn	Metal Industries Development Institute
14	MesfinLakew	Metal Industries Development Institute
15	GirmaAlemu	Metal Industries Development Institute

2.4.2 Focus Group Discussion at Metal Industries Development Institute (1)

No	Name	Organization
1	WorkenehDelelegn	Metal Industries Development Institute
2	MesfinLakew	Metal Industries Development Institute
3	GirmaAlemu	Metal Industries Development Institute
4	DerejeAsfaw	Metal Industries Development Institute
5	ShumuTefera	Metal Industries Development Institute
6	MebruHabteMariam	Metal Industries Development Institute
7	DerbewHaileMariam	Metal Industries Development Institute
8	KassaAlemaye	Osaka steel PLC
9	WondimuDeginetu	Toussa Steel Factory
10	ShimelesEshete	Toussa Steel Factory
11	DemirewMetaferia	Sintec Ethiopia PLC
12	Saad Ibrahim	Euro Cable
13	Belay Alemneh	Alem Steel PLC
14	YisakAlemneh	Osaka steel PLC
15	Adem	Alem Steel
16	MeseretAlemneh	Osaka Steel PLC
17	AlemnehBeyene	Alem Steel
18	TesemaGidey (Capitain)	METEC / HMMBI
19	BikilaBekana	METEC / MFI
20	MossaYimam	METEC / ABMI
21	AbuhaiMihretie	Ethiopian Standards Agency
22	Yonatan Mengesha	Ethiopian Conformity Assessment Enterprise
23	BirhanuBechere	Ethiopian Society of Mechanical Engineers
24	MengistuBayoulign	Ethiopian Society of Electrical Engineers

2.5. Textile and Garment Setor

2.5.1 In-depth Interview

S.N	Participant	Organization and position
1	Mr. Solomon	Chemical Industry Directorate Director
2	Mr. Dooyoung Lee	Director of Korean Trade-Investment Promotion Agency (KOTRA)
3	Park JoonKyu	Golobal Development Agency (Korean International Development Agency)
4	Mr. Assefa Aga	Ethiopian Cotton Growers Association (President)
5	Mr. Sileshi Lemma	General Director , TIDI

2.5.2 Focus GroupDiscussion with Textile Industry Development Institute Directors (1)

S.N	Participant Name	Organization
1	EphremBekele	Engineering Services, Director
2	AnagawNigussie	Knitting and Waving Technology Director
3	AmhaBekele	Research and Laboratory Director
4	FikirTesfa	Finishing Technology Director
5	Seyoum T/ab	Garment Technology Director
6	YaredMesfin	Marketing Director

2. 5.3 Focus Group Discussion on Enterprise cultivation (2)

S.N	Participants	Organization
1	MintesinotAsfaw	Federal Small and Micro Enterprise Development Agency (FESMEDA)
2	AlmazAychluhim	Federal Small and Micro Enterprise Development Agency (FESMEDA)
3	AsmayitGetachew	Micro and small enterprise representative (FertShimena)
4	AzmerawBirhanu	Textile Industry Development Institute (Expert)
5	DemelashEnsermu	Textile Industry Development Institute (Expert)
6	AredaBatu	BahrdarUniversiy, Institute of Textile and Design Development
7	Ashenafitaye	BahrdarUniversiy, Institute of Textile and Design Development
8	BesufekadTeju	Traditional producer
9	BirukWubshet	Representative from Federal TVET Agency

2. 5.4 Focus Group Discussion with private sector (3)

S.N	Participant Name	Organization
1	AredaBatu	BahrdarUniversiy, Institute of Textile and Design Development
2	AshenafiTaye	BahrdarUniversiy, Institute of Textile and Design Development
3	GetachewBiratu	Owner of Akaki Garment
4	BiniyamAbreham	Ayka Addis Garment
5	MehauetSelimAkman	Ayka Addis Garment
6	BerihanuDegefa	Owner of EdgetGarment
7	YilikalBisenebit	Owner of OASIS Abysinia
8	Mohammed Umer	Owner of Nov Star Garment
9	MindaTafesse	Garment manufacturer
10	BelaynehBeka	Owner of Beka
11	AbiyGidey ()	ASB, Garment Accessories Manufacturing
12	Elias Mulugeta	Owner of EDM Garment

2.5.4 Focus Group Discussion with experts of the Textile Industry Development Institute (4)

S.N	Participant Name	Organization
1	Haile Sime	Senior Industrial Engineer
2	WongelHadis	Lead Mechanical Engineer
3	DoloBenka	Senior Textile Engineer
4	HenokAdamu	Inspection Expert
5	WondwosenShiferaw	Marketing Expert
6	MesayAlemayeu	Textile Engineer
7	YitbarekTilahun	Senior Textile Engineer
8	MuluChale	Assistant Textile Engineer
9	Abubeker Mohammed	Textile Engineer

3. Focus Group Discussion with Foreign Investors forum (5)

S.N	Participant Name	Organization
1	Members of the Chinese Business forum	Chinese Business forum
2	Members of the European Union Business forum	European Union Business forum

Validation workshop for the industry development Roadmap, strategic plan, and institutional setup (2013-2025)

September 5 , 2013

List of participants

No.	Name	organization	position
1.	HE Ato Ahmed Abtew	MOI	Minister
2.	HE Dr. Mebrahtu Melese	MOI	State minister
3.	HE Ato Sisay Gemechu	MOI	State minister
4.	HE Ato Mekonnen Manyazewal	N. Planning co.	Minister
5.	HE Ato Shiferaw shigute	MOE	Minister
6.	HE Ato Wondwossen kiflu	MOE	State minister
7.	Ahmed Nuru	MoI	Advisor
8.	Fassil Taddesse	ETAGAMA	President
9.	Belay wolleye	AAU	Asst. Prof
10.	Tamiru Habte	MOA	D/Director
11.	Henok Eshetu	ECF	Expert
12.	Yalew Alemayehu	ELIA/wallce	Board member
13.	Addisu Ferede	BDV-IoTex	Director
14.	Zewdu Kassa	MOE	Manager
15.	Zebene Kifle (Dr)	AAU	Asso.prof
16.	Alemu Ambaye (C/E)	Eth.shipping&Logi	DCEO
17.	Nigussie G/mariam	Advisor	MOI

18.	Temesgen walelign	MOFED	Director
19.	Asfaw Abebe	Femseda	D/Director
20.	Yaregal meskir	MOI	Director
21.	Getahun Tadese	Eth Kaizen inst.	G/D
22.	Bekele Temesgen	ERTA	A.A
23.	Sileshi Lema	ETIDI	D.G
24.	Teshome Lakew	MOA	Director
25.	Habtamu Kassie	Chemical Assoc.	Board member
26.	Nuredin Mustefa	MoFA	Senior expert
27.	Tewodros Assefe	Coffee Roasters	v/president
28.	Asres w/giorgis	MoWE	Director
29.	Feleke Lema	Meat & diary	Advisor
30.	Teshome megersa	EKI	Deputy D.G
31.	Salehu Anteneh	AAU	ASSt.prof
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39.	Tadele Ferede	AAU	Reviewer
40.	Girma Damte	MOI	Expert

41.	Fitsum Arega	MOFED	Expert
42.	Minilik Habtu	ECRA	President
43.	Said Mohamed	MOM/GSE	Geologist
44.	Wudineh Zenebe	REPORTER	Journalist
45.	T/haimanot Geses	EEPCO	Chief officer
46.	Abadi lagesse	T.M	Chief officer
47.	Getahun Haile	Eth Animal feed A.	Board member
48.	Yohanse Tilahun	ATA	S. Director
49.	Endale Shewangizaw	MOE	Advisor
50.	Hunegnaw Abebew	LIDI	Senior Economist
51.	Workneh Delelegn	MIDI	D/G
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77.	Samuel Mulugeta	MIDR	Board member
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