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ETHIOPIAN ECONOMICS ASSOCIATION

Terms of Reference (TOR)

For the Study

on

Agricultural Finance and Insurance in Ethiopia: Challenges and Policy Options

April 2021

1. Background

In the last two decades there have been numerous initiatives to improve the provision of agricultural finance for smallholder farmers. Many of these innovations show great promise in strengthening agricultural and rural livelihoods applicable to specific conditions of countries. Great progress was recently made in reaching out to smallholder farmers through a variety of financial services. What is new is agricultural financing in new situations and for farmer types that were unbankable before, not the innovations themselves. Such innovations tend to combine several financing concepts, and are nearly always embedded in value chain development. These innovations tackle specific constraints in agricultural finance and reduce lending risks. Eleven major financial innovations with the targeted financial constraints and their suggested applicability are described by Jessop, et al (2012)[1].

These major financial innovations include member-owned localized finance, agricultural leasing, value chain finance (VCF), agricultural factoring, warehouse receipt finance, processors, credit guarantees, insurance (index) to support credit, price smoothing, technology (mobile banking using cell phone, mobile van); and extension services and financial literacy.

Risk is an important aspect of the farming business. The uncertainties inherent in weather, yields, prices, government policies, global markets, and other factors that impact farming can cause wide swings in farm income. Agricultural Risk Management (ARM) is an innovative approach for improving the resilience of vulnerable rural households, and leveraging finance and investment. ARM allows farmers and businesses to be pro-active and increases their capacity to assess, prepare for, absorb and adapt to risks. Risk management involves choosing among alternatives that reduce financial effects that can result from such uncertainties. Smallholder farmers in Ethiopia are confronted with many exogenous risks. There are five general types of exogenous risks in agriculture: production risk, price or market risk, financial risk, institutional risk, and human or personal risk.

Agricultural risks can be at farm level and/or in the agricultural supply chain. Risks faced by farmers are numerous and varied, and are specific to the country, climate, and local agricultural production systems. The key risks faced by farmers are weather risks, biological risks (e.g. pests), price risks, labor and health risks, policy and political risks. On the other hand, the major risks in agricultural supply chains include weather, natural disaster, biology and environment, market, logistics and infrastructure, management and operations, policy and policy institutions.

Agricultural insurance has existed for decades in the world, though it is a new phenomenon in Ethiopia. Both crops and livestock can be insured against production risks. However, such insurance is likely to be very expensive because it essentially covers

[1] Jessop, R.,B. Diallo, M. Duursma, A. Mallek, J. Harms, and B. van Manen (2012), Creating Access to Agricultural Finance Based on a Horizontal Study of Cambodia, Mali, Senegal, Tanzania, Thailand and Tunisia. Agence Française de Développement (AFD), France.

all business risks, and is rarely sold. The same is true for single-risk insurance when the risk is very high. Such coverage is extremely expensive and simply not sellable. This also explains why agricultural insurance in developing countries like Ethiopia has failed to take off. Furthermore, agricultural insurance entails relatively more risk of moral hazard and adverse selection. Individualized insurance is also poorly suited to smallholders in developing countries because of the high closing costs for individual risk policies, claim assessment and monitoring. Financially illiterate farmers may not understand the concept of insurance (and may try to reclaim their insurance premium if the insurer has not made any payouts, a risk event has not occurred).

2. The Context of Agricultural Finance and Insurance in Ethiopia

2.1. Agricultural finance

Financial cooperatives and microfinance institutions (MFIs) are the two major sources of rural finance in Ethiopia. There are 33 micro financial institutions (MFIs) with a total of about ETB 6.6 billion serving around 3 million clients in Ethiopia (CIMMYT, 2015)[2]. These financial services provided by MFIs include savings, group and individual loans, micro-leasing activities, micro insurance, and domestic remittance. The micro financial industry is mainly dominated by the top five MFIs (ACSI, DECSI, OCSSCO, ADSCI and OMO) operating in the major four regions and in Addis Ababa city. These MFIs have a market share of about 80%. Most of the MFIs are directly owned or indirectly backed up by regional states where private operation is mainly nonexistent.

Rural households and micro, small and medium enterprises in Ethiopia are significantly underserved with a range of financial services including loans, saving, insurance, and remittance. About 80% of the potential rural demand for loans is still unmet (CIMMYT, 2015). The demand by rural households and enterprises is estimated to be ETB 2.6 billion for 4.2 million rural households and ETB 3.4 billion for 35 thousand enterprises, respectively. Lending rates of Ethiopian MFIs range between 9% year-declining rate to 24% flat rate, which is seriously criticized for it is higher compared to the rate in commercial banks (CIMMYT, 2015).

The impacts of these two financial service providers on agricultural technology adoption was found to have significant positive impact on adoption and extent of technology use, with significant variation by farm size and input type (Gashaw et al, 2015)[3].

Regardless of its role in the Ethiopian economy in terms of GDP share, employment opportunity, and export earnings, agriculture is less attractive sector where financial institutions have little appetite to finance and insure it. These low financial services in agriculture are mainly attributable to less profitability of smallholder farmers operating

[2] CIMMYT (2015), Financial products for farmers and service providers report Ethiopia

[3] Gashaw Tadesse, S. Rashid, C. Borzaga, K. Getnet (2015), Rural Finance and Agricultural Technology Adoption in Ethiopia: Does Institutional Design Matter? International Food Policy Research Institute (IFPRI) Discussion Paper Series 01422.

below optimal size of land (lack of economies of scale in land use), use of outdated farm practices, and the multiple risks involved (including production, market, institutional and financial risks).

Provision of financial services to agriculture is proven to have high transaction costs arising from the salient features of the sector in Ethiopia: (a) small transaction size, about ETB 1250; (b) lumpy or seasonal cash flows which is difficult to prepare feasible repayment schedule; (c) illiquid and perishable collateral; (d) high covariance across borrowers; (e) geographical dispersion of borrowers and difficulty to reach and monitor them; and (f) heterogeneity and distinct dynamics of businesses and farm households.

About four financing models with movable collateral supposed to be relevant to farmers in the Ethiopian context were suggested by CIMMYT (2015): (a) direct smallholder lending with collateral of equipment finance and tight market value chain finance (VCF); (b) indirect lending through cooperative with leasing collateral and loose VCF with output buyer; (c) emerging farmers finance with collateral of infrastructure finance and VCF with input supplier; and (d) saving account linked input finance with collateral management and factoring.

2.2. Agricultural insurance

Traditional risk-coping mechanisms for farmers include savings (cash or in-kind such as grain or cattle, building materials, household items), agricultural diversification, relying on traditional solidarity such as family, seeking part-time employment to supplement farm incomes, leaving the land for an urban center, or hoping for government handouts. Mostly, these strategies are economically inefficient as they disperse the farmers' efforts, and make farmers less likely to adopt new technologies and to instead focus on subsistence (World Bank, 2011)[4].

Evidence shows that specialized farms score higher on indicators of business development and social well-being than mixed farms with a subsistence orientation. Moreover, traditional risk management fails in case of catastrophic events that affect the entire community or country. Farmers with access to better risk-management tools can afford more efficient, but riskier, production decisions, and can better overcome low-frequency/ high impact risk events. Effective risk management techniques would also turn farmers into more acceptable clients for finance providers. Agricultural insurance is one of such risk-management methodologies.

Risk management strategies available to households can be grouped into three categories: household and communities, markets, and governments. Crop insurance products can broadly be classified into two major groups: indemnity-based insurance and index insurance. Indemnity-based crop insurance comprises two indemnity products, damage-based indemnity insurance (or named peril crop insurance) and yield-based crop

[4] World Bank (2011), Weather Index Insurance for Agriculture: Guidance for Development Practitioners. The World Bank, Washington, D.C.

insurance (or multiple peril crop insurance, MPCI). Index-based crop insurance also has two types of products, area yield index insurance and weather index insurance (WII):

Index insurance is an important recent innovation which may address the shortcomings of traditional insurance. It is a “derivative” instrument in that the pay-out to farmers is triggered when the threshold value for an underlying risk indicator (the “index”) is reached, this without actually having to observe the damage done to the farmers’ fields or livestock (World Bank, 2011). This greatly reduces the transaction costs, the risk of moral hazard and adverse selection. In many index insurance policies, multiple thresholds are defined, with increasing pay-outs as the risk event increases in severity. The index can be based on the amount of rainfall (lack of or excess), humidity levels, arrival of locusts, water levels in a river, occurrence and strength of a hurricane, sea-surface temperature, frost, hailstones, etc. This requires highly capable and independent measurement tools, such as weather stations. Remote-sensing techniques with satellites are being used as well (*e.g.* Canada, USA). In some insurance systems, an estimate is made, *via* sampling, of the average crop yield in an agricultural region. Farm losses are modeled with actuarial methods (given detailed and long-term data). Successful index insurance is characterized by a high level of transparency and rapid payment after the index has been triggered (both are a problem in traditional harvest insurance, which requires assessment of actual losses by an expert).

To be effective, the index used must be highly (and spatially) correlated with the damage that farmers actually incur (in order to avoid basis risk). Thus, evidence shows examples whereby the index consists of several risk variables. Furthermore, to counter basis risk, the places where the index is being monitored (*i.e.* weather stations) must be sufficiently close to the farmers. This can be a problem in regions with many different sub-climates. Also, such weather stations must be of high quality, make very frequent measurements, and preferably transmit these real-time to a base station for analysis. To facilitate acceptance by farmers, the index must be easily and objectively observable, and understood by all. An objective and easily verifiable index, with measurement conducted by an independent body, also facilitates re-insurance in the international market. This is crucial because the systematic nature of a natural disaster can easily overwhelm local insurers. Re-insurance policies can also be securitized and sold on the international capital markets.

The importance of index insurance is that it can be combined with credit products provided by banks, MFIs or input traders. The mere presence of natural disaster risk deters banks from financing agriculture, as banks cannot absorb the covariate losses that could be incurred by many of its clients simultaneously. Index insurance mitigates some of the exogenous risks that farmers are faced with, thus making farmers more bankable. Evidence provides some examples of finance providers teaming up with an insurance company, thus covering part of the loan risk through index insurance. When the index is triggered, indicating that an agricultural risk event has occurred, the insurance pays a predetermined sum in favor of the financial institution.

In WII, the weather variable that can form an index must satisfy some properties. It must be observable and easily measurable, objective, transparent, independently verifiable, reported in a timely manner, consistent over time and experienced over a wide area.

Index insurance is not without limitations. The major problems are related to basis risk, relatively high cost (about 10%), limited insurance coverage (usually rainfall, leaving other risks uncovered), unsuitable regulatory environment to micro and index insurance, and the challenge in the distribution of index insurance (World Bank, 2011). The key innovation in combining index insurance with credit is the standardization of the approach, making reinsurance possible, and thus reducing lending risk. Index insurance can be part of a value chain finance approach, which solves the problem of how to distribute the insurance. Index insurance incorporated into value chain financing is distributed by the same entities that provide the credit such as traders, technical operators, farmers' associations, or (micro) finance institutions.

The key factors ensuring a successful combination of index insurance with credit include (a) Viability of the index insurance, including strong and transparent risk modeling, sufficient and capable weather stations, efficient product distribution and swift claim processing; (b) Insurance is embedded in a total package of production-enhancing assistance to farmers; (c) Index insurance is most effective and most likely to be sustainable when it facilitates access to other services (markets, technology, credit) that substantially increase farm productivity and expected income, thus helping farmers to recover the cost of insurance; and (d) Sustainability also requires scale and standardization.

3. Objectives and Research Questions

This study is expected to generate country-representative and latest empirical evidence on the demand for and supply of agricultural finance, risk management and insurance and intervention options for addressing constraints of agricultural finance and insurance in Ethiopia. It particularly aims to:

a. Characterize farm households by their perception on formal and informal financial institutions and their services;
b. Measure the level of demand (stated preferences) for agricultural financial services (including credit, saving, insurance, and remittance);
c. Investigate the level of supply of agricultural finance in the country:
d. Assess feasible models of financing Ethiopia's smallholder agriculture;
e. Identify the major agricultural risks in Ethiopia and profile their impact and prevalence by subsectors (crop and livestock);
f. Examine the possible options of agricultural insurance products suitable to the major agro-ecologies and livelihoods in the country; and
g. Identify sectors, subsectors, and activities, and outputs/inputs for extending agricultural credit and insurance.

This study is, therefore, designed to undertake research on agricultural and rural finance and insurance for addressing the following research questions:

- How financial services are provided in agriculture and rural areas?
- What is the level of demand for financial services to farm households and businesses?

- What is the current supply of micro financial services in agriculture?
- Which rural and agricultural activities are bankable and non-bankable?
- Which financing models are suitable to farmers operating at different scales and settings?
- What is the level of risk involved in agricultural activities?
- Which traditional risk management practices are adopted by farmers?
- Which agricultural risks are insurable and non-insurable?
- Which insurance products are relevant to smallholder farmers and businesses operating at different scales and settings?
- Which insurance products are suitable to farmers and businesses in different settings?
- Which weather variables for WII are suitable to activities in different settings?

4. Data and Methods

The proposed study uses country-representative primary data collected from households in selected regions of the country. Secondary data will also be used for investigation of available trends and profiles of agricultural and rural financial services. The Global Financial Inclusion (Global Findex) database 2017 on Ethiopia collected by the World bank will be particularly utilized as the major secondary source of data in the study.

The primary data will be collected from representative sample households selected using a standard sampling technique with appropriate sampling weight. Depending on the nature and scope of the study, the data will be analyzed by using standard and econometric/statistical software packages.

The primary data will be collected from representative sample households selected using a standard sampling technique with appropriate sampling weight. Multistage stratified random sampling techniques will be employed in order to select households from areas where both crop and livestock production are widely practiced

Crop and livestock production and marketing risks are the primary sources of income loss for farmers. These areas include sedentary mixed farming systems in central Ethiopia and pastoral areas involved in livestock production. For ease of access to data collection, regions and enumeration areas around the central Ethiopia are selected. Accordingly, Oromia, Amhara, SNNPR, and Afar are considered for the survey. The sample size to be selected from each region is based on the proportion used in the Living Standards Measurement Study (LSMS) for Ethiopia in 2018/19. The samples of the LSMS-2018/19 in these regions[5] cover about 49.6% of the total rural households in the LSMS (3792). The sample size determined for this study is 300 which is proportionately distributed to each region (Table 1).

[5] The percentage of rural households in the LSMS data is 14.2% for Oromia, 13.6% for Amhara, 13.3% for SNNPR, and 8.5% for Afar region.

Table 1: Distribution of sample rural households across regions

Region[6]	Proportion in LSMS (%)	Samples
Oromia	14.2	86
Amhara	13.6	82
SNNPR	13.3	81
Afar	8.5	51
Total	**49.6**	**300**

Note: SNNPR denotes Southern Nations, Nationalities and Peoples Region.

5. Scope of the Study

The researcher will undertake the following tasks within five months after signing of the contract.

1. Desk review of previous and existing studies, policy and strategy documents related to agricultural finance and insurance;
2. Preparation of a standard research proposal document as per this TOR and submit to EEA for validation and approval;
3. Collection of all relevant primary and secondary data from appropriate sources;
4. Organizing, editing, manipulating, and managing data for analysis;
5. Analyzing the data using appropriate methods and statistical/econometric software packages and tools;
6. Producing a comprehensive draft research report and submission to EEA for feedbacks;
7. Incorporation of comments and preparation of a revised research report for re-submission to EEA;
8. Presentation of findings on policy forms to be organized by EEA and incorporating comments for resubmission to EEA. EEA will send the revised version to reviewers;
9. Incorporation of reviewers' comments, producing final research report, and submitting to EEA; and
10. Preparation of policy working papers and policy briefs;

6. Expected Outputs

The main expected outputs of the study will be:

[6] Enumeration areas (zones, districts, and kebeles) in the selected regions will be identified by the researcher in the full proposal document. These areas are expected to be in or near to central Ethiopia (North Shewa zone for Amhara; West Shewa, East Shewa or North Shewa zones for Oromia; Gurage zone for SNNPR; and Zone 3 for Afar region).

1. A standard research proposal prepared as per this TOR;
2. Data sets used in the study;
3. Research reports at different levels;
4. Presentation of findings on policy forums; and
5. Policy working papers, policy briefs and journal manuscripts;

7. Eligibility and Selection Criteria

The researcher shall have direct and relevant background on research related to the agricultural finance and insurance and household modeling and analysis, as well as the required knowledge and skill on application of advanced and updated statistical/econometric software packages. Applicants should fulfil the following eligibility criteria:

- PhD degree in economics and related disciplines;
- A minimum of five publications related to the topic;
- Demonstrated experience in using Stata, SPSS, and other statistical software packages;
- Demonstrated experience in undertaking and finalizing similar research projects.

The following criteria with the respective weights shall be employed to select resource persons for offering the training:

- Field *of study (30%);*
- Research publications (30%);
- Research and professional *experience (40%); and*
- *Women empowerment (5%).*

8. Deliverables and Timeline

The expected duration of this study (after signing the contract) is five months as depicted in Table 2 below.

Table 2: Major deliverables and timeline

S/N	Deliverables/Activities	Month 1				Month 2				Month 3				Month 4				Month 5			
1.	Desk review of available resources																				
2.	Preparation and submission of proposal																				
3.	Preparation of data collection tools																				
4.	Data collection, edition, and manipulation																				
5.	Data analysis																				
6.	Research report writing and submission of draft report																				
7.	Incorporation of comments from EEA and submission of revised version to EEA																				
8.	Presentation of findings on policy forum																				
9.	Submission of a validated report to EEA																				
10.	Preparation of publishable manuscripts																				

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ETHIOPIAN ECONOMICS ASSOCIATION

Terms of Reference (TOR)

For

the Study on

Liberalizing Financial Sector in Ethiopia: Constraints, Consequences and Policy Issues

April 2021

1. Background

Financial markets and banking services in Ethiopia are closed to global operators. Due to their recent emergence (since the early 1990s), private banks in Ethiopia have been protected from global competition. However, it is argued that opening the financial market or foreign ownership, is a condition for competitiveness and innovation in the banking industry.

Liberalization of the financial market is expected to create multiple opportunities for accessing competitive and differentiated financial services including saving, credit, insurance, and remittance. Liberalization of the financial sector may allow for the introduction of new financial products related to secondary capital markets and agent banking suitable for ensuring financial inclusion and competitiveness of the financial market. Currently, the Ethiopian financial market lacks introduction of many financial services expected to ensure financial inclusion and competitiveness.

One of such markets is secondary capital market. The introduction of secondary capital markets is generally expected to promote safety and security in transactions since exchanges have an incentive to attract investors by limiting disreputable behavior under their watch. When capital markets are allocated more efficiently and safely, the entire economy benefits. While the primary capital market assists in capital formation by raising funds, the secondary market will promote liquidity and disinvestment and reinvestment and thereby ensure diversion of funds to the most productive sectors of the economy. The primary market is dependent on the secondary market in such a way that the latter provides the necessary liquidity for the issued securities. This liquidity helps issuers attract more demand for their security offerings in the primary markets, which leads to higher initial sale prices and thus a lower cost of capital. By providing safety and regulation in the secondary market, stock market attracts investors in primary market.

Agent banking is the other financial product which enables to access the underserved population and to ensure financial inclusion. The conventional packaged banking services offered by banks have been found to be inappropriate to meet the huge demand for financial services in the Ethiopian context. Agent banking is provision of limited scale banking and financial services to the underserved population through engaged agents under a valid agency agreement.

Evidence shows that liberalization of the financial sector has both benefits and costs. Development of financial sector in Ethiopia is constrained by two basic factors. The primary factor is the closed financial market characterized by a non-competitive market structure where no foreign banks participate. The second is the dominant role of state-owned banks where competition and innovation in the sector is substantially stifled. The Ethiopian economy is generally expected to benefit from financial sector liberalization related to the entry of foreign banks with innovative financial products and international baking expertise. On the other hand, there is also an argument that liberalization of the financial market would adversely affect the domestic banks due to the fierce competition expected to prevail. These controversies require scientific evidence for liberalizing the financial sector and to measure the expected benefits and costs of the policy measure.

2. Context of the Financial Sector in Ethiopia

Both the demand and supply side of the money market in Ethiopia is constrained by multiple factors adversely affecting the realization of financial inclusion. In the recent years, the geographic reach and penetration of banks among the population has shown improvement. The number of branch banks have significantly increased from 970 in 2010/11 to more than 6,511 in 2019/20. The branch per capita and branch density for Ethiopia in 2015 were 5.5 and 3.19, respectively (Andualem and Rao)[1]. As a result, bank branch to population ratio dropped from 1:82,000 during 2010/11 to 1:15,702 during 2019/20 (NBE,2011; 2020) [2]. Though Ethiopia's financial sector growth was following output growth in the first two phases, government has started to play a key role in accelerating the sector's growth through active interventions for improving financial access (Yohannes, 2019)[3]. Lack of money, distance, fixed cost, and documentations are important obstacles to financial inclusion in Ethiopia.

Ethiopia's strong economic growth over the past 15 years was driven by large-scale public infrastructure investment contributing to strong growth in agriculture and services. According to official data, GDP growth averaged 10.4 percent in 2004-2018, making Ethiopia one of the world's fastest-growing economies. This has resulted in a dramatic increase in Gross National Income (GNI) per capita, from US$140 in 2004 to US$790 in 2018 (World Bank, 2019[4]).

However, this remarkable recent economic growth performance supported by robust investment was not matched by similarly high savings rates. The growth rates of saving as percentage of GDP did not match the growth in investment over the same period. According to the 2018/19 report by National Bank of Ethiopia (NBE), the growth in investment as a percentage of GDP was 35.2% during 2018/19 while the growth in domestic saving rate was only 22.3% (NBE, 2018/19)[5]. Due to the huge investment-saving gap, public investment has been financed by tapping external financing, keeping government consumption low, and deploying heterodox mechanisms such as controlled interest rates and financial repression (World Bank, 2019).

[1] Andualem Ufo & K. Sambasiva Rao1 (2017), Financial Inclusion in Ethiopia, Int. Journal of Economics and Finance; 9 (4).
[2] National Bank of Ethiopia (NBE), 2010/11. Annual Report of NBE
[3] Yohannes Ayalew (2019), Ethiopian Financial Sector Development, In: Fantu Cheru, Christopher Cramer, and Arkebe Oqubay (eds), The Oxford Handbook of the Ethiopian Economy, pp 159-174, Oxford University Press, UK.
[4] World Bank, 2019. Ethiopia Financial Sector Development: The Path to an Efficient Stable and Inclusive Financial Sector
[5] National Bank of Ethiopia (NBE), 2018/19. Annual Report of NBE.

Though the country has shown some progress in terms of financial inclusion in recent years, financial inclusion in Ethiopia has a long way to go (Efina 2016)[6]. According to the World Bank's Findex report, in 2017, the percentage of adults with an account rose to 35%, up from 22% in 2014. Account usage has improved as well with about 26% of adults save at financial institutions (as compared to 14% in 2014) and 11% borrow from financial institutions (as compared to 7% in 2014). However, Ethiopia still lags behind other Sub-Saharan African countries. In Kenya, for example, 82% of adults have an account, while in Rwanda, account ownership stands at 50%. This shows that the financial inclusion in Ethiopia is far below its peers and the average SSA countries, 43% of adults have an account (Findex, 2017)[7]. The performance of Ethiopia's financial sector on other financial metrics, including the number of banking branches and ATMs per 100,000 adults and depositors and creditors for 1,000 adults, Ethiopia was substantially behind other Sub-Saharan African countries (IMF, 2014). Besides the reach of the financial industries, bureaucratic and financial challenges often prevent individuals and companies from accessing and using Ethiopian financial services.

On the other hand, majority of Ethiopians, mainly the rural community and households with little access to financial services and small saving, rely more on informal institutions for their financial needs. For example, according to Findex (2017), although 62% of Ethiopians reported saving money, only 26% of them saved formally at financial institutions, while 38% saved with a person outside of a family or at an informal saving club (for example, Iqub). During the same period, 41% of Ethiopians said they borrowed money, but only 11% borrowed from financial institutions. The rest borrowed from family or friends (31 percent) and 8% borrowed from a saving club (8%). This indicates that there is a demand for using financial services though majority of the people are depending on informal financial institutions either because of lack of physical access to the formal financial institutions or lack of awareness to use the formal financial institution. Studies also show that lack of physical access to financial service is one of the major problems in enhancing financial inclusion (Zewdu, 2014)[8].

The assertion that Ethiopia prefers informal saving clubs rather than formal financial organs is justified by its less successful financial inclusion strategy compared to other East African countries (Tekeste and Hossein)[9]. This preference of the country, combined with unemployment and poverty, is the barrier to the success of financial inclusion strategy of the country.

[6] Efina. 2016. Financial Inclusion. Available online: http://www.efina.org.ng/about-us/financialinclusion/

[7] World Bank. 2017. *The Global Findex Database*. Washington, DC: World Bank, Available online: http://documents.worldbank.org/curated/en/332881525873182837/The-Global-FindexDatabase-2017-Measuring-FinancialInclusion-and-the-Fintech-Revolution.

[8] Zwedu, G. A. (2014). Financial inclusion, regulation and inclusive growth in Ethiopia.

[9] Tekeste Berhanu and Hossein Azadi (2020), Financial Inclusion in Ethiopia: Is It on the Right Track? Int. Journal of Financial Studies, 8(28): 1-13.

3. Objectives and Research Questions

This study generally intends to assess the expected outcomes of liberalizing the financial sector in Ethiopia to global operators. It specifically aims to:

a. Assess the competitiveness of financial institutions (banks, MFIs, insurance companies, etc.) in Ethiopia;
b. Identify the underlying factors determining performance of financial institutions in Ethiopia;
c. Investigate the relative position of domestic financial institutions to the expected international financial operations;
d. Identify banking innovations and financial products in the Ethiopia's financial sector; and
e. Assess the costs and benefits of liberalization of the financial sector in Ethiopia.

This study is, therefore, designed to undertake research on liberalization of the financial sector in Ethiopia for addressing the following research questions:

- Which financial institutions are serving the population in Ethiopia?
- How competitive are these financial institutions domestically?
- Which are the underlying factors affecting the performance of financial institutions in Ethiopia?
- How financial operators in Ethiopia perceive the existing financial market and policy?
- What is the relative competitive position of financial institutions if the sector is liberalized?
- What are the gains and losses of opening the financial sector to foreign operators?
- Do financial operators in Ethiopia understand the consequences of liberalization of the financial market?
- What are the overriding issues expected as a bottleneck for financial inclusion in Ethiopia?

4. Data and Methods

The proposed study uses primary data collected from financial institutions and government organizations operating in the financial sector, including selected banks and insurance companies, MFIs, and NBE. Secondary data will also be used for investigation of available trends in the financial market. The primary data will be collected from representative sample financial institutions selected using a standard sampling technique with appropriate sampling weight. Depending on the nature and scope of the study, the data will be analyzed by using standard and econometric/statistical software packages. Stratified random sampling techniques will be employed in order to select financial institutions and their branches in Addis Ababa.

5. Scope of the Study

The researcher will undertake the following tasks within five months after signing of the contract.

1. Desk review of previous and existing assessments, policy and strategy documents, financial laws and policies;
2. Preparation of a standard research proposal document as per this TOR and submit to EEA for validation and approval;
3. Collection of all relevant primary and secondary data from appropriate sources;
4. Organizing, editing, manipulating, and managing data for analysis;
5. Analyzing the data using appropriate methods and statistical/econometric software packages and tools;
6. Producing a comprehensive draft research report and submission to EEA for feedbacks;
7. Incorporation of comments and preparation of a revised research report for re-submission to EEA;
8. Presentation of findings on policy forms to be organized by EEA and incorporating comments for resubmission to EEA. EEA will send the revised version to reviewers;
9. Incorporation of reviewers' comments, producing final research report, and submitting to EEA; and
10. Preparation of policy working papers and policy briefs;

6. Expected Outputs

The main expected outputs of the study will be:

1. A standard research proposal prepared as per this TOR;
2. Data sets used in the study;
3. Research reports at different levels;
4. Presentation of findings on policy forums; and
5. Policy working papers, policy briefs and journal manuscripts.

7. Eligibility and Selection Criteria

The researcher shall have direct and relevant background on research related to financial economics and financial policy analysis, as well as the required knowledge and skill on application of advanced and updated statistical/econometric software packages. Applicants should fulfil the following eligibility criteria:

- PhD degree in financial economics, monetary economics, macroeconomics and related disciplines;
- A minimum of five publications related to the topic;
- Demonstrated experience in using GAMS, Stata, EViews, SPSS, and other statistical software packages; and
- Demonstrated experience in undertaking and finalizing similar research projects.

The following criteria with the respective weights shall be employed to select resource persons for offering the training:

- Field *of study (30%);*
- Research publications (30%);
- Research and professional *experience (40%); and*
- *Women empowerment (5%).*

8. Deliverables and Timeline

The expected duration of this study (after signing the contract) is five months as depicted in the following table.

Table 1: Major deliverables and timeline

S/N	Deliverables/Activities	Month 1				Month 2				Month 3				Month 4				Month 5			
1.	Desk review of available resources																				
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9.	Submission of a validated report to EEA																				
10.	Preparation of publishable manuscripts																				

Ethiopian Economics Associations (EEA)

Terms of Reference (ToR)

For the Study

On

Agriculture-Industry Linkages for Employment and Economic Transformation in Ethiopia

April 2021

1. Introduction

At the early stage of transition from an agrarian economy to a modern economy, the manufacturing subsector in the typical developing economy has a greater potential to absorb surplus labor compared to the services sector, which in the typical low-income country is dominated by informal services. While it is feasible to move unskilled workers from agriculture into better-paid jobs in manufacturing activities, it is not feasible to move them into the formal services sector. Formal services sectors such as banking, insurance, finance, communications, and information technology are characterized by relatively low employment elasticity and also employment in these sectors requires education to at least upper secondary school level. Unskilled workers can find employment only in informal services such as retail trade and distribution, passenger transport and construction, where wages and productivity are often low. By contrast, employment in manufacturing industry, particularly in traditional labor-intensive industries such as clothing and footwear, require mostly on-the-job training (Athukorala and Sen, 2015)[1].

While it is generally recognized that industrialization can potentially be a powerful force for employment generation and poverty reduction, the magnitude of the employment and poverty impact may differ by stage of economic development. At an early stage of economic development, countries are more likely to specialize in labor-intensive industries, so that for low-income countries, industrialization can potentially have a strong positive effect on job creation and consequently, poverty reduction, under the appropriate policy environment. At higher levels of income, as countries start moving out of labor-intensive industries and into capita and technology-intensive industries, the direct effect of industrialization on employment and poverty reduction will be weaker, though there may be strong indirect effects of industrialization on poverty reduction, as the profits obtained from the growth of capital-intensive industries are re-invested in the economy, leading to further economic growth and poverty reduction (see Athukorala and Sen, 2015, pp:84-86).

The employment effect of industrialization can be decomposed into three elements. First, there is a direct effect of industrialization on employment operating through the increase in the total output of the manufacturing sector. Second, in the process of industrialization, there may be changes in the shares of different industries in overall manufacturing output, increasing the output of labor-intensive sectors and reducing output of capital-intensive sectors. Finally, employment can increase by an increase in the labor intensity of production, within industries (see Athukorala and Sen, pp: 66). Thus, achieving high manufacturing growth rates is not a sufficient condition for employment generation; employment impact of a given rate of output expansion depends on capital deepening in the production process at the individual industry level and a shift in the product mix from relatively more labor-intensive product lines to capital-intensive product lines (Krueger, 1981; Gutierrez *et al.*, 2007)[2]. The relative importance of these three components of

[1] Athukorala, P. C., & Sen, K. ,2015. Industrialization, employment and poverty. *Michael Tribe and John Weiss (eds.), Routledge Handbook of Industrial Development, London: Routledge*, 84-95.

[2] Gutierrez, C., Orecchia, C., Paci, P. and Serneels, P. 2007. *Does Employment Generation Really Matter for Poverty Reduction?* Policy Research Working Paper 4432. Washington DC: World Bank.

industrialization-employment nexus is determined not only by the nature of the resource endowment of a given country but also by its policy regime choice.

In Sub-Saharan Africa including Ethiopia, the contribution of manufacturing subsector to GDP and employment has been minimal. For instance, although the total value increases more than doubled between 1996 and 2015, the share of manufacturing in GDP decreased from 12 percent to 10 percent during the same period (Woldemichael et al, 2017)[3]. This indicates that the recent economic growth that the continent has experienced is not matched with appropriate structural transformation and growth has been largely without jobs. For example, in Ethiopia, the responsiveness of formal employment to growth is found to be very low with 1 percent GDP growth having resulted in less than 0.4 percent growth in total employment (Page and Shimeles, 2015; Newman et al., 2016)[4].

In countries such as Ethiopia, where agriculture is the dominant sector of the economy, resources for the development of industrial sector need to be generated primarily by creating strong linkage between agriculture and industry and exploiting these linkages. This should allow increasing of agricultural productivity which enables industries to grow with strong backward linkages. This in turn stimulates increased demand for agricultural and other primary products. For the structural transformation to be effective, the agriculture-industry linkage in the short run should focus on the development of industries that demand agricultural inputs such as textile, leather, sugar, agro-processing manufacturing industries as they strengthen the link between the agriculture and manufacturing sectors. These industries due to their backward and forward linkages, are promising industries to unlock the structural transformation process in an agriculture dominate economy, such as Ethiopia, under right polices and enabling environment.

2. Structure of Ethiopian Economy and Rationale of the Study

The Ethiopian economy has recorded a 9 percent growth in 2018/19, higher than the 7.7 percent growth in the year 2017/18. This growth was attributed to a 12.6 percent growth in industrial output, an 11 percent increase in the service sector, and a 3.8 percent expansion in agriculture. Consequently, the share of industry in GDP has increased to 28.1 percent in 2018/19 from 27 percent in 2017/18, while that of the service sector slightly rose to 39.8 percent from 39.2 percent. In contrast, the share of agriculture to GDP dropped to 33.3 percent from about 35 percent during the same period (National Bank of Ethiopia, 2018/19)[5]. This gradual but steady shift in the structure of the economy reflects the government's policy direction of developing the manufacturing sector and promoting export-led growth while continuing to give due attention to modernizing the agriculture sector, which has dominated the country's economic base for years.

Krueger, A. O. 1997. Trade Policy and Economic Development: What have We Learned? *American Economic Review*. 87 (1): 1–22

[3] Woldemichael, A., Salami, A., Mukasa, A., Simpasa, A., & Shimeles, A. (2017). Transforming Africa's Agriculture through Agro-Industrialization. *Africa Economic Brief*, *8*(7), 1-12.

[4] Page, J., and Shimeles, A. (2015). Aid, employment and poverty reduction in Africa. African Development Review, 27(S1), 17-30.

Newman, C., Page, J., Rand, J., Shimeles, A., Söderbom, M., & Tarp, F. (2016). Made in Africa: Learning to compete in industry. Brookings Institution Press

[5] National Bank of Ethiopia (NBE), 2018/19. Annual report

As stated in different national policy documents (for example, see GTP-I, GTP-II), the strategic direction of the government of Ethiopia (GoE) is to bring about the accelerated structural transformation of the economy through enhancing industrialization. In doing so, GoE is convinced that agriculture is the engine that can propel the socio-economic development of Ethiopia by providing the basis for industrialization and necessary surplus for the expansion of other sectors of the economy. The strategy gives a priority to the development of agriculture as a primary stimulus for the sustainable growth of industry and is expected to raise productivity in both agriculture and industry through appropriate linkages between sectors, management, technology, human resources and various incentive mechanisms.

However, agriculture remains underdeveloped and agricultural productivity remains strikingly low in Ethiopia despite the considerable political support the sector received in terms of high budgetary allocation. For example, the share of Ethiopia's manufacturing industry is well below the bench mark countries which are now middle-income countries (Newman et al, 2016). This indicates that the economic growth rate that the country has registered over the past two decades has been without significant structural changes. This calls for a renewed effort for a structural transformation and diversification of Ethiopia's economy, so as to maintain the recent growth momentum, reduces poverty and inequality, create decent jobs, and improve the quality of lives and well-being of Ethiopians. For this, industrialization with strong backward and forward linkages with agriculture is a formidable strategy for Ethiopia to realize the much-needed structural transformation and sustain its economic growth.

This study, thus, intends to assess and generate evidence on the opportunities and constraints that the country faced in creating employment opportunities in industries over the past decades. Furthermore, the study will examine factors behind the weak structural transformation observed in Ethiopia's economy (from agricultural to industry) and propose policy recommendations that help overcoming this.

3. Objectives of the study

The main objective of the study is to assess the role of agricultural-industry linkages in employment creation and structural transformation of the Ethiopian economy. More specifically, the study will:

- Identify factors behind weak structural transformation observed in the Ethiopian economy despite the double-digit growth registered during the last decades;
- Assess the contribution of agriculture and industries in general, and manufacturing industries in particular to employment creation and economy of the country;
- Assess exiting opportunities to exploit for the agriculture-industry linkage to contribute to the country's economy and employment creation;
- Review experiences and lessons of from other relevant countries which remarkably transformed their economies from a predominantly agrarian economy into industrialized economy; and
- Review the existing agriculture-industry linkage policy and strategy documents, examine the documents and identify limitations/short comings of this documents,

if any, and propose policy reforms that are necessary for ensuring strong and effective agriculture-industry linkages that will bring the needed structural transformation of the country's economy.

4. Methodology

4.1. Data sources

The researcher is expected to combine both primary and secondary sources of data to address the stated objectives of the study.

Secondary data sources: The researcher should identify all relevant secondary data sources and use it to address the objectives of the study. The researcher is expected to synthesize a dataset from different reports, surveys and explore time dimension of the data. All available data sources should be explored and discussed with EEA before going fully into data analysis phase.

Primary data sources: In addition to the secondary data sources, the researcher is also expected to collect primary data from selected industries, agri-businesses and commercial farms. Industries, commercial farms and firms engaged in agribusiness from Addis Ababa, Oromia, Amhara, SNNP and Dire Dawa city will be interviewed to examine the backward and forward linkages among these industries and the agriculture sector. For this, the researcher is expected to develop a comprehensive structured interview. The number of industries, commercial farms and agri-businesses to be selected from each region is provided in the following table. However, the number of commercial farms, industries and agri-businesses to be selected from each region given in Table 1 below is an indicative sample and can be adjusted in consultation with the researcher during the inception phase.

Table 1[6]: Suggested Number of interviews with industries, commercial farms and agro-industries

Region/city administration	Commercial farms	Industries	Agribusiness	Total
Addis Ababa	3	5	3	11
Oromia	3	5	3	11
Amhara	3	3	3	9
SNNP	3	3	3	9
Dire Dawa	2	2	2	6
Total	14	18	14	46

In addition to firms and enterprises engaged in commercial farms, agribusinesses and industries, Key Informant Interviews with local administration and experts of government agencies like the Ministry of Trade and Industry (MoTI), Ethiopian Institute of Agricultural

[6] Tigray region is excluded from the sample due to the current security situation in the region

Research (EIAR), regional chamber of commerce and sector associations, the Ethiopia Textile Development Institute (ETDI), and producers' associations will be conducted.

Furthermore, the researcher is expected to review relevant national development strategies and policies aimed at developing the agriculture-industry linkages as an engine for structural transformation of the country's economy, including:

- The Agricultural Development Led Industrialization Strategy (ADLI-1994);
- The National Industrial Development Strategy (NIDS-2002/03);
- Sustainable Development and Poverty Reduction Program (SDPRP-2002/03-2004/05);
- Plan for Accelerated and Sustained Development to End Poverty (PASDEP-2005/06-2009/10);
- Growth and Transformation Plan I (GTP-I:201011-2014/15); and
- Growth and Transformation Plan II (GTP-II:2015/16-2019/20)

4.2. Method of data analysis

The researcher is expected to employ a combination of both quantitative and qualitative approaches. The specific quantitative approach to be employed should be specified and discussed by the researcher in the technical proposal. The details of analytical methods are expected to be justified and explained in line with the objectives of study. The researcher should include this in the technical proposal.

5. Main Activities and Deliverables

5.1. Main activities and outputs

The main tasks/activities to be conducted by the researcher include the following:

- Identify available secondary data sources that will address all objectives of the study;
- Organize the identified data sources and make it ready for the data analysis;
- Develop data collection instruments for the primary data and collect the primary data indicated under section 4.1
- Utilize both primary data to be collected and all available representative secondary dataset mentioned under section 4.1 and others, and produce the research report;
- Produce a draft report and submit to the EEA for evaluation as per the timeline to be agreed upon and incorporate the comments given by the EEA staff;
- Produce a revised report and present the findings of the study at dissemination workshops to be organized by EEA;
- Revise the draft report based on the comments from the workshops;
- Submit the final report;

- Make the necessary review and edition of the report for publication as a book chapter in the State of the Ethiopian Economy (SEE);
- Produce one manuscript for publication in reputable journal to be co-authored by the researcher and EEA staff.

5.2. Deliverables

The main deliverables of the study are:

- Full proposal of the study;
- Draft report of the study;
- Presentation of finding on dissemination workshops to be organized by EEA
- The final report incorporating all feedback of the EEA and relevant stakeholders;
- One journal manuscript to be co-authored by the researcher and EEA staff
- Refined version of the report for publication as a book chapter in SEE

6. Eligibility and Selection Criteria

The researcher shall have direct and relevant background on research related to industrial economics and macroeconomic modeling and analysis, as well as the required knowledge and skill on application of advanced and updated statistical/econometric software packages. Applicants should fulfil the following eligibility criteria:

- PhD degree in economics and related disciplines;
- A minimum of five publications related to the topic;
- Demonstrated experience in using GAMS, Stata, SPSS, and other statistical software packages;
- Demonstrated experience in undertaking and finalizing similar research projects.

The following criteria with the respective weights shall be employed to select resource persons for offering the training:

- Field *of study (30%);*
- Research publications (30%);
- Research and professional *experience (40%); and*
- *Women empowerment (5%).*

7. Work Plan

The expected duration of this study (after signing the contract) is five months as explained below.

Table 2: *Major deliverables and timeline of the study*

S/N	***Deliverables***	***Expected completion date***
1.	*Submission of full proposal*	*Within 3 weeks of signing the contract*
2.	*Submission desk review checklist and dataset to be used for the study*	*Within 8 weeks of signing of the contract*
3.	*Submission of draft research report*	*Within 15 weeks of signing of the contract*
4.	*Presentation of research finding on dissemination workshops*	*Within 17 weeks of signing of the contract*
5.	*Submission of final report that addresses all comments by relevant stakeholders and EEA*	*Within 20 weeks of signing of the contract*